THE NOVA SCOTIA MEDICAL BULLETIN

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People, Populations and Planning

There remain but fifteen years before the Orwellian era breaks upon us. For the sake of argument, let us assume that Big Brother will then so arrange the possibilities for human conception that each woman ("couple," in the marital sense, may no longer be appropriate), will be permitted 2.7 offspring. Two permits to conceive may be issued to each woman, and M. Drapeau, as the kindly old selector, will devise a scheme to select those who may obtain one extra permit. By this neat arrangement compensation will be made for the abortions, perinatal and infant deaths (if the neonatologists of that era permit any!), the accidents, and the youthful illnesses. The numerical level of the (human) race will be assured, together with a decent allowance for a modest increase sufficient to eat up the extras provided by the new technology in agriculture and aquaculture.

The point that concerns us now is that we should be preparing to advise the young women of 1984 when to use their permits. There are only fifteen years in which to do the necessary research.

What information do we now possess on the subject of family planning? The highest rate of successful pregnancy outcome occurs between maternal ages 18 and 30. We know nothing of the effect of paternal age. We know that pregnancy is likely to be more successful under conditions of good nutrition, good public and personal health, good housing and health services. But we don't know the merits, or otherwise, of various spacings between pregnancies, nor the effect of various factors such as deferment of conception to permit education, employment, accumulation of goods, etc. Should bartering of conception permits be allowed, ought we to encourage anyone to have large families, of, say, six or more children? Is the hazard of conception after age 30 sufficiently great to warrant strong advice against such events? And should we, even now, be giving thought to the eugenic considerations involved in the reproduction of diabetics, those with known chromosomal disorders, or those with other rarer or less well defined genetic stigmata?

Obviously, we have much to learn – even for the permissive society of today. The biologic and emotional needs of couples concerning offspring have received little consideration to date, but are central to the theme of the John Stewart Memorial Lecture, which appears in this Bulletin. Family planning is generally taken to mean nothing more than effective contraceptive arrangements. Whether the stringencies of George Orwell's predictions befall us or we continue to muddle along as we are, the personal needs of our patients, as much as the ecological problems of human society demand that we give thought to the appropriate use of our new-found ability to control conception. □

S.C.R.

Medical Society Summer Meeting

1969

Wednesday, Thursday, Friday
June 25th, 26th & 27th.

RELAX WITH OLD FRIENDS IN
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JOHN STEWART MEMORIAL LECTURE

The Ecology of Infertility
The Barren Couple in a World of Conception Control

S. Leon Israel, M.D., F.A.C.O.G., F.A.C.S.

Philadelphia, Pa.

John Stewart died at his home in Halifax on the day after Christmas in 1933.[1] So illustrious and so beloved was he among you that we are met today, 35 years later, to honour his name. From what I have read of him, he bore gracefully the mantle of lustre befitting an immediate disciple of Lister but yet remained a true son of your Maritime Provinces. A patent measure of his value lies in recalling that he was your Professor of Surgery as well as Dean of your Medical Faculty for many years. Although the razor's edge of his major interest was indubitably surgical, he possessed—possibly because of his lifelong zest for classical literature—a love of mankind. The last mentioned is comforting at this moment because it makes me believe that Professor Stewart would have approved the subject chosen for this year's Memorial Lecture.

The Barren Marriage

The ever-present problem of involuntary infertility affects the welfare of society because reproduction is an essential aspect of marriage, an institution that is an integral part of our civilization. Such infertility ranks high among the causes of deep unhappiness in marriage because a childless union, irrespective of the culture in which it occurs, lacks the strong cementing force that leads parents to subordinate all selfish desires for the common good of the family. Inasmuch as *ecology* is the science that deals with the interrelationships of living things with their common environment and with one another, it may be applied to the problems of infertility.

The ecology of infertility involves the relationship of each marital partner to the other as well as to their common environment. It embraces also the psychologic issues engendered by the occurrence of involuntary barrenness in a world becoming more and more devoted to the control of conception. Even though the faults of irresponsible parenthood are everywhere evident, especially since the world-wide control of deaths has markedly elevated the world's population, the infertile couple deserves proper advice regarding their problem. We must therefore presently have a Janus-faced attitude, realizing that large families are no longer a social good and, at the same time, appreciating that it is imperative that the universal interest in human fertility—particularly for those who experience difficulty in achieving it—be maintained at a high level.

Basic causes of infertility. The male is just as likely to be at fault in the barren marriage as is his wife. It is well known that a thorough study of both partners is essential to rectification of a childless union. The practical advantage of this modern concept regarding the causes of infertility, one that implies joint responsibility and connotes the possible existence of manifold etiologic factors in both partners, is that it calls attention to the fact that marriage is the "incredible entanglement of two people."[2] Such an attitude promotes the philosophy of partnership culpability, for infertility is a marital problem, not the sole responsibility of either husband or wife. According to this viewpoint, the elements conducive to a normal degree of fertility are adversely or favourably altered by various determinants, often minor, but nonetheless important under certain conditions. A sterile union usually is not the result of defects in one partner but is caused by the sum total of several factors in both partners. It is this constellation of minor components, often interrelated environmentally, that deserves emphasis.

Because of the limitation of both time and space, some selection has been exercised in this presentation. Viewing the wide field of infertility, that is openly pock-marked with many unsettled issues, I have chosen to speak of only two general topics—first, several gonadal factors that have been of recent interest; and second, some aspects of marriage as they relate to infertility. The omission of a group of nongonadal cause of barrenness—such as disturbances of cervical function, uterine disorders, tubal obstruction, pelvic endometriosis, and immune reactions—has been dictated solely by the several forces that limit the content of a single lecture.

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*Professor of Obstetrics and Gynecology University of Pennsylvania, John Stewart Memorial Lecturer 1968.

GONADAL FACTORS

Inasmuch as the two basic conditions for fertility include the more-or-less cyclic production of a normal ovum and the repeated availability of a large number of normal spermatozoa in a favourable medium, this discussion must embrace both ovulation and spermatogenesis.

Ovulation

Recalling that there are more species differences in the area of reproductive physiology than in any other aspect of mammalian growth and development, and remembering that the ovary of the adult woman has a finite supply of ova, I shall restrict myself to the *clinical* aspects of the process of ovulation, an act that is as specific in its occurrence as all other features of ovarian responsiveness. The precise mechanism, the actual tissue process of ovulation, still eludes us. We do know, however, that ovulation *is* accompanied by hyperemia. Following ovulation, blood vessels and lymphatics extend into the area and ultimately form an elaborate, well-developed vascular system with some resemblance to the sinusoids of the liver. Luteinization parallels blood-vessel penetration, bespeaking an intimate physiological relationship. It is tacitly accepted that luteinising hormone (LH) is the ovulating hormone after follicle-stimulating hormone (FSH) has acted. The quantitative aspect of the therapeutic induction of ovulation, using these two agents, has been a clinical problem. When gonadotropin administration succeeds, there is a tendency to multiple ovulations (superovulation). In physiological circumstances, not those of therapeutically induced ovulation, control factors operate to limit the number of follicles that may ovulate to that characteristic of our species. However, recent recognition that a dose–response curve, rather than an all-or-none reaction, is the rule in gonadotropin-induced ovulation, may lead to control of the unwanted excessive action.[3]

From the standpoint of recent advances, two subjects specifically related to ovulation deserve consideration here—the primary amenorrhoea of hypogonadism and the polycystic-ovary syndrome.

Hypogonadism and primary amenorrhoea. We are able now to identify varieties of primary amenorrhoea that result from ovarian dysfunction secondary to a genetic or acquired disease of the pituitary, thyroid, or adrenals. In addition, we know that various metabolic and systemic diseases of childhood, as well as such intracranial neoplasms as craniopharyngioma, may evoke primary amenorrhoea. However, that which is accountable to a purely ovarian derangement, primary hypogonadism, arises from either genetic abnormalities of the gonad, including agenesis or dysgenesis, or prepubertally acquired lesions of the ovary, such as those that follow viral or bacterial oophoritis and excessive irradiation. It is useful in the differential diagnosis to divide the patients with primary hypogonadism who have never menstruated into the following five clinical categories:

(1) Turner's syndrome (gonadal agenesis)—evidenced by lack of development of secondary sex characters, shortness of stature, and the presence of one or more of the stigmata often associated with this condition, such as webbing of the neck, undersized mandible, multiple molluscous lesions of the face and back, and coaretation of the aorta. Confirmatory laboratory findings include a negative sex-chromatin pattern in the buccal smear and elevated urinary excretion of gonadotropins.

(2) Hypogonadism and short stature but without the pathognomonic features of Turner's syndrome—characterized as gonadal dysgenesis and also associated with elevated urinary gonadotropins as well as a chromatin-negative buccal smear. As many as 20% of patients with gonadal dysgenesis may be sex-chromatin positive, although chromosome analysis may show mosaicism or a defect of an X chromosome in some.

(3) Eunuchoid hypogonadism featuring normal or tall stature because of relatively long limbs. Such hypogonadism, showing no abnormality of sex-chromatin pattern and karyotype, is attributable to an inflammation such as mumps oophoritis affecting the ovaries during childhood. Occasionally, a tall habitus may be associated with gonadal dysgenesis as proved by chromatin and chromosome evaluation. requiring differentiation by culdoscopic or laparoscopic ovarian biopsy.

(4) Women of average stature and normal skeletal proportion. If there is association of well-developed breasts, sparse pubic hair, absence or poor development of the uterus, vaginal smear with good oestrogen effect, and absent chromatin body, the syndrome of testicular feminization should be suspected. An XY karyotype is confirmatory.

(5) Hirsutism present since childhood. If there is also an enlarged clitoris and deformity of the urethral meatus, congenital adrenal hyperplasia is likely. If such is the case, the buccal smear is positive, and both 17-ketosteroid and pregnanetriol levels in the urine are elevated.

Polycystic-ovary syndrome. The most common and probably best known condition of the ovary linked to infertility is bilateral polycystic enlargement, familiarly known since 1935 as the Stein–Leventhal syndrome and presently recognised as not limited to women of a fixed symptomatic constellation. Except for anovulation, the clinical pattern of polycystic ovaries among infertile women is not constant. There is usually long-standing menstrual dysfunction, including oligomenorrhoea, amenorrhoea, and bouts of irregular uterine bleeding. Mild to moderate hirsutism occurs in about half of the patients and some overweight in about 30% of them. The absence of hirsutism and obesity, particularly in an infertile woman whose history of menstrual dysfunction extends back to puberty, does not preclude the diagnosis of polycystic ovarian disease. There are no typical laboratory findings in this condition.

excepting a persisting anovulatory type of endometrium. When clinical suspicion of this disorder exists but the ovaries are not palpably enlarged—either because they are not grossly larger than average (though typically polycystic) or because obesity blocks the palpatory sense—culdoscopy or laparoscopy offers the diagnostic key, for such ovaries do have a pathognomonic appearance.

The present-day treatment of infertility caused by the anovulation of polycystic ovaries may be surgical or nonsurgical. When the ovaries are 3–4 times larger than average, I prefer to perform bilateral wedge-resection that is longitudinal, cuneiform in shape, and sufficiently deep to have its knife-like edge reach the hilar area; the portion of ovary remaining should approximate the size of an average organ. When the diagnosis is in question, especially if an adrenal origin of the hirsutism and amenorrhoea is suspected because of elevated 17-ketosteroid levels, a trial of adrenal-suppression therapy is indicated for several months. Clomiphene citrate in low dosage (50 mg. daily for 5 to 7 days) induces ovulation successfully in patients whose polycystic ovaries are of relatively modest size as well as in those who have failed to respond to wedge-resection.[4]

Spermatogenesis

The process of sperm production is noncyclic and begins at approximately age 10, continuing into old age. Although its maintenance rests entirely upon gonadotropins, it is less dependent upon fluctuations of hormone secretion than the ovary is. The process is, however, affected unfavourably by various illnesses, including those stemming from poor nutrition, specific endocrine disorders, and alterations in local circulation.

Recent advances in the comprehension of aberrations of spermatogenesis have emphasized the importance of varicocele and given rise to research into the use of frozen preserved semen for therapeutic insemination.

Varicocele. The pathogenesis of spermatogenic alteration associated with varicocele is not clear. The derangement has been attributed to both increased testicular temperature and reflux flow of adrenal steroids.[5] Irrespective of its aetiology, the faulty spermatogenesis of varicocele is eliminated in about two-thirds of those in whom the varicocele is surgically cured.

It is of passing interest that, despite the lack of an acceptable explanation for the deficient spermatogenesis associated with varicocele, its operative treatment is admissible because of the results. There is great similarity here to the good results that were achieved in the polycystic-ovary syndrome by wedge-resection long before the pathogenesis of its anovulation began to be understood.

Frozen preserved semen. The advent of ultrafreezing techniques to preserve spermatozoa has abetted the veterinary applications of artificial insemination. The use of frozen semen is commonplace as well as successful in the promotion of bovine fertility. However, results have been far from outstanding in human recipients.[6] There is a general similarity in cryogenic techniques as applied to human and to animal semen, but frozen human spermatozoa evidently have less fertilizing capacity than fresh ones.[7] When cryogenic technobiology improves, as it doubtless will, and banks of frozen sperm are more generally available for selective artificial insemination, we shall be face to face with the fanciful positive genetic engineering portrayed in the famed essay of H. J. Muller,[8] in which he wrote: "The proposed mode of procedure is to establish banks of stored spermatozoa, eventually ample banks, derived from persons of very diverse types, but including as far as possible those whose lives have given evidence of outstanding gifts of mind, merits of disposition and character, or physical fitness. From these germinal stores, couples would have the privilege of selecting such material, for the engendering of children of their own families, as appeared to them to afford the greatest promise of endowing their children with the kind of hereditary constitution that came nearest to their own ideals."

The application of this ultrarational method to control the genetic quality of a population—a population that would automatically be limited in number—was projected by Muller for the 21st century. If one looks at our present world, he will be apprehensive that the 21st century will be far too early for widespread acceptance of the genetic storehouses envisaged by Muller. The use of artificial insemination will not be the barrier, for that is already a tolerable treatment for selected infertile couples. It seems obvious that such positive genic planning as Muller's requires a dreamer's world, one beyond the imagination of an average man. Even if we accept the reality of Osler's aphorism that "the philosophies of one age have become the absurdity of the next, and the foolishness of yesterday has become the wisdom of tomorrow,"[9] we shall not be ready in a mere century to engage in such deliberately selective reproduction. It would be easier to accomplish on the imaginary island of Sweeney Agonistes, where there is "nothing at all except only three things—birth, copulation, and death."[10] Since, however, our world is far more complex, we require the wit as well as the projected time that Shaw proposed to attain such hereditary perfection—as he did in *Back to Methusaleh*—not the 21st century but the year 31,920. It is possible that, by that Shavian year, men will not only have uncovered the frozen secrets of selectively preserved spermatozoa but also will have accepted the principle of world brotherhood.

MARITAL PROBLEMS

Consideration of issues that involve the ecologic relationship of marital partners leads to discussions of the changing role of women, the possible effects of age at marriage upon fertility, and an ephemeral group of psychological disturbances.

Today's Women

In most societies of the present-day world, the sociobiologic unit of the nuclear family is the basis for symbiotic relationship between men and women. As Weston LaBarre[11] has said: "The full adult social state in all societies is a procreative membership in a biological family—not necessarily monogamous, not necessarily lifelong in duration, but nevertheless a condition to which all adult human animals permanently strive." The utilitarian cohesion of members of the family is the very essence of life in our culture, and this, from the viewpoint of infertility, may create emotional problems for some women. Their reproductive function may be in competition with other demands upon them.

The inevitability of marriage. In our society, a single person is a nonperson; marriage is expected of adults. Demographic biologists believe that some form of kinship linkage is a basic mammalian trait and that marriage merely represents the human resolution of a procreative alliance, its variations being contingent upon cultural practices. The salience of this argument is reflected in sociologic and anthropologic definitions of marriage. C. D. Darlington,[12] a biologist, puts it this way: "A large proportion of mankind, like pigeons and partridges, having passed through a period of playfulness or promiscuity, establish what they hope and expect will be a permanent and fertile mating relationship. This we call marriage." Darlington's definition is similar, at least in purpose, to that of Margaret Mead,[13] whose description of marriage is a universal one, useful for all cultures: "Marriage is a public acknowledgment of the responsibility for offspring." Although both statements illustrate well the reproductive role of the family unit, they do not emphasise the singularity of the woman's contribution, the unilateral quality of which may create psychological problems when it is frustrated by rivalrous effort to erase the differences between motherhood and fatherhood. The fateful role of the growing girl, as Bettelheim[14] emphasises, is far more difficult than that of a boy. Although both have the arduous adolescent problems of achieving sexual maturity and attaining self-identity, the girl has impressed upon her that the fulfilment of her life comes with marriage and the bearing of children. Fatherhood is not part of a boy's daydreams, but motherhood is part of a girl's adult self-image. The adolescent girl projects pictures of herself as a wife and mother, but not accurately. As many novelists have observed, the difference between a girl and a married woman are so vast that the girl can no more conceive of them than the married woman can return to girlhood. Although her socially competitive role tends to create more masculinity, the woman's innate femaleness—readily fueled by the home training and education she receives—is always there. Although her biological and preparatory differences are obvious, confusion may arise because of the triple role—wife, mother, and job-holder—assigned to the woman. The tripartite responsibility—homemaking, childbearing, and working—is not only difficult for some women but requires particular emphasis on matters that directly oppose development of a career.

Conflicts of interest. The connotations of the multifaceted duties of women are highlighted by asking the question, "What is a woman?" The answer cannot be the simple, cynical reply that she is "a female man."[15] In relation to a man, a woman is a person who is also wife, mother, mistress, daughter, and rival. These several images create contentions of gender for some infertile wives: where there should be complementary actions there may be competitive ones.

The emancipation of women during the past century has given them open freedom and full education. However, political equality and greater economic opportunity do not make the reproductive role of women easier, for they remain women. The fully emancipated woman, the one who reaches a pinnacle in the world of industry or who carves a deep niche in a profession, is ego-fulfilled only if she has been able to fulfil her maternal role also.

Age at marriage. Inasmuch as the female reproductive span is relatively short and generally more productive during its first half, postponement of marriage to years beyond the twenties tends biologically to reduce births. As mentioned previously, such delay gives women time to attain stations of value in the community. However, it is evident that a rise in the age at marriage necessarily means that the period of marital childbirths will be reduced. In fact, this was the European marriage pattern of the 18th and 19th centuries, and it was a good fertility-control method. It was readily recognised then that, if there were no means to support a family, marriage and childrearing were to be postponed. It is a principle that operates effectively to reduce population growth. As van de Walle[16] points out: "A population in which forty per cent of the women of childbearing age are unmarried will find its birthrate seriously lowered, numerous illegitimate births notwithstanding."

It has been affirmed from many sources that the best age for childbearing is between the years 18 and 25.[17] After that age there is a gradually decreasing capacity to conceive and to have children, although this cannot be quantified precisely. Inasmuch as the desire for children is linked to deep-set motives, including questions of role fulfilment as a man or woman, emotional factors affect the older woman to a greater degree. It is granted that economic elements and the need for psychological adjustment in marriage support the viewpoint that children should not arrive too early. On the other hand, it is equally evident that delay of motherhood until well into the thirties is medically disadvantageous. In addition to the risk of ovarian malfunction, such older women may be subjected to the hazard of psychological

blocks to fertility, however difficult it is to understand the pathogenesis of such disturbances.

Psychological factors. The hypothalamus and the forces it represents dominate the control of ovulation and menstruation. This fact has focused attention upon the role of the midbrain in all matters related to reproduction in the female, including such intangibles as the postcoital transport of spermatozoa and the contribution of orgasm to fertility. The acyclic character of spermatogenesis withheld attention from a possible relation of the hypothalamus to male infertility. If the male is vulnerable to psychogenic impairment of fertility, his need for counselling in this area has been overlooked. Apart from the universally acknowledged detriments of impotence and premature ejaculation, there is plausible likelihood of an emotional aetiology in certain instances of faulty spermatogenesis, incomplete emission, and even of total retrograde ejaculation with backflow of semen into the urinary bladder.[18] If such alterations of function are possible, it is not remote to suggest that neurophysiology has something to investigate here. Indeed, what Grinker[19] terms "the circular processes of transactions," involving interrelations between psychobiological systems of one or more individuals and social events, may be relevant in this area.

It has been speculated that some human infertility arises from poor uterine transport of spermatozoa, but it is difficult to test this hypothesis clinically; experimental attempts to relate it to orgasm have not succeeded.[20] Pregnancy does occur repeatedly in women who have never experienced orgasm. Nonetheless, assertions continue to be made that sexual arousal and orgasm may be responsible for an oxytocin-stimulated, epinephrine-inhibited pattern of uterine motility that propels spermatozoa upward.

One may go further afield and hypothesise concerning psychogenic aberrations of the biochemical environment within the female genital tract that make it inimical to spermatozoa or that alter nutrition of the early embryo and engender faulty implantation. These errors may stem, as Sturgis[21] has emphasised, from an anxiety-induced disturbance in the secretion of proper fluids by the tubes and uterus. That this is not a far-fetched explanation is supported by such collateral evidence as the regulation of salt and water balance through hormonal actions on the kidney, "known to be closely related to stimuli which enter the central nervous system."[22] In summarising the relation of life situations to conditions conducive to ultimate fertility, Weil and Tupper[23] put it succinctly: "Every living being is constantly engaged in an endeavor to stabilize itself and maintain its integration."

It seems reasonable to conclude that the physiological functions of both male and female genital tracts, including the capacity of orgasm, are abetted by tranquillity and deterred by anxiety, fear, and pain.

Summary

The relationship of each marital partner to each other as well as to their common environment has been reviewed. Pertinent gonadal disturbances, embracing both ovulation and spermatogenesis, as well as relevant problems of present-day marriages as they may affect fertility have been outlined. □

References

1. **Obituary.** *Canad. Med. Ass. J.* 30: 221, 1934
2. **Haley, J.** Marriage therapy. *Arch. Gen. Psychiat.* 8: 213, 1963
3. **Cox, L. W., Cox, R. I., and Black, T. L.** Induction of ovulation; an attempt to avoid complications. *Amer. J. Obstet. Gynec.* 102: 177, 1968.
4. **Kistner, R. W.** Induction of ovulation with clomiphene citrate (clomid); review. *Obstet. Gynec. Survey*, 20: 873, 1965.
5. **Charny, C. W. and Baum, S.** Varicocele and infertility. *J.A.M.A.* 204: 1165, 1968.
6. **Ackerman, D. R.** The effect of cooling and freezing on the aerobic and anaerobic lactic acid production of human semen. *Fertil. Steril.* 19: 123, 1968.
7. **Behrman, S. J.** Techniques of artificial insemination. *In* Progress in Infertility, ed. by S. J. Behrman and R. W. Kistner. Little, Brown, Boston, 1968, pp. 717–730.
8. **Muller, H. J.** Human genetic betterment. *In* The Control of Human Heredity and Evolution, ed. by T. M. Sonneborn. Macmillan, New York, 1965, pp. 100–122.
9. **Bean, W. B.** Aphorisms of Sir William Osler. Thomas, Springfield, Ill., 1961, p. 91.
10. **Eliot, T. S.** Sweeney Agonistes. Faber, London, 1932, p. 24.
11. **LaBarre, W.** The Human Animal. Phoenix Press of the Univ. of Chicago, Chicago, 1955, p. 109.
12. **Darlington, C. D.** Genetics and Man. Macmillan, New York, 1964, p. 138.
13. **Mead, M.** Male and Female: A Study of the Sexes in a Changing World. Morrow, New York, 1949, p. 101.
14. **Bettelheim, B.** Growing up female. *Harper's* 225: 120, 1962.
15. **Nash, O.** It's about time. *In* The Private Dining Room. Little, Brown, Boston, 1953, pp. 140-141.
16. **Van de Walle, E.** Marriage and marital fertility. *Daedalus*, Spring 1968; *Proc. of the Amer. Acad. Arts and Sciences* 97: 486, 1968.
17. **Israel, S. L. and Deutschberger, J.** The relation of the mother's age to obstetric performance. *Obstet. Gynec.* 24: 411, 1964.
18. **Lief, H. I., Israel, S. L., Garcia, C. R., and Charny, C. W.** Sex after 50. *Human Sexuality* 2:41, 1968.
19. **Grinker, R.** Towards a Unified Theory of Human Behavior. Basic Books, New York, 1956, p. 11.
20. **Masters, W. H. and Johnson, V. E.** Human Sexual Response. Little, Brown, Boston, 1966, pp. 115-116, 120-122.
21. **Sturgis, S. H.** Higher education, uterine fluid and sterility. *Fertil. Steril.* 8: 1, 1957.
22. **Thorn, G. W.** Approach to the patient with "idiopathic edema" or "periodic swelling." *J.A.M.A.* 206: 333, 1968.
23. **Weil, R. J. and Tupper, C.** Personality, life situation and communication: A study of habitual abortion. *Psychosom. Med.* 22: 448, 1960.

PLAN

TO

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SUMMER—1969—MEETING

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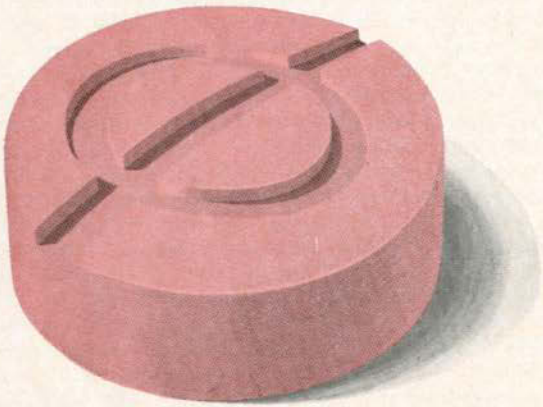

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Tissue Transplantation: Legal and Ethical Problems

IAN. D. MAXWELL, M.B., Ch.B.
Halifax, N. S.

The sudden upsurge in successful, or relatively successful, organ transplants, particularly kidneys and hearts, raises profound problems concerned with law and ethics which it is urgent for all practising physicians to consider.

Use of Living Donors

The removal of an organ such as the kidney from a healthy human donor is fraught with serious medical, philosophic, and moral implications, and the risk of using a living donor has to be weighed against the potential gain. Although opinions differ concerning the potential hazards of renal donation, some urologists maintaining that a donor with only one remaining kidney regains full renal function within three to six months, Liljekvist[1] found increased levels of serum creatinine in 4 out of 13 donors 30 months after nephrectomy, with some degree of renal insufficiency in 2. Even more disturbing are those cases in which the donor suffers some post-anaesthetic or postoperative complications, or in which pyelonephritis or arteriosclerosis develops later. The use of living donors is constrained in both Italy and France to the donation of blood and skin only. The codes in most other countries are somewhat broader, but all are agreed that very careful measures must be taken to ensure that there is no improper pressure exerted on the donor. There is a particular danger of this in the use of isografts from identical-twin donors, because this type of graft unquestionably has the best chance of long survival. It would be unreasonable to suggest that the doctor should not disclose this fact to the twin (or his parents, if he is a minor), but he must be very scrupulous to ensure that the potential donor is absolutely free to decline. This is possible only if a high degree of medical secrecy is maintained in all dealings with possible donors.

It has been argued that, by making what he clearly recognizes is a sacrifice (even if enthusiastic surgeons minimize the degree of this sacrifice), the donor may gain some real spiritual or psychiatric good, and that, if his sacrifice is denied him, he may suffer life-long pangs of conscience. On the other hand it is usual for donors to have depression of mild to moderate degree following voluntary nephrectomy—the so-called "mourning" reaction—and sometimes this may be profound if they feel that they have been pressured. Murray[2] tells of one donor, rejected for medical reasons, who was heard to mutter under his breath: "Well now, I hope that satisfies the family." Incidents such as this certainly give one pause. There is serious question whether someone watching a close relative gasping in terminal uremia can be said to be volunteering his kidney freely and in a truly informed manner, or whether an identical twin, particularly a minor, told that he is the only person completely suitable, is not under improper pressure.

If it be decided that isografts between twins may be fully ethical in certain circumstances, the problem is compounded by attempting to decide at what age consent is valid. The Law of Consent requires both the capacity for understanding the nature and consequences of the medical procedure and for a clear description by the physician so that intelligent consent may be given. In many ways it is difficult, if not indeed impossible, for a lay person to comprehend all of the consequences of an operation; for this reason, many physicians shy away, perhaps rightly, from describing in detail all of the remote dread complications. In the case of minors, I believe everyone would agree that although a parent should never be permitted to volunteer the kidney of his child, he should have a veto power to protect his child from improper pressure, and that the situation is completely different from that which arises in the case of blood transfusions for the children of Jehovah's Witnesses. It is felt by some that, if the procedure is ethical, valid consent by the minor should be possible well under the age of majority: some would set it as low as 8 years and others as high as 18. In this regard it should be noted that persons may be conscripted into the army at age 17 and that they may be held responsible at law from the age of 12 years.

At the other end of the scale from the identical twin is the unrelated donor - usually the husband or wife of the recipient. Probably no one is more strongly motivated to make a tissue donation than is a spouse, but there are many arguments against the practice, on both practical and ethical grounds. Not only is there some evidence that allografts from unrelated donors survive less well than those from donors who are directly related to the recipient (particularly if of a compatible leukocyte- or tissue-type), but also there is a very strong suggestion that

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the survival times of renal allografts from unrelated donors are so little different from those of cadaver kidneys that this fact virtually excludes the use of the unrelated donor.[5,6] Furthermore, if the welfare of the children is considered, it is questionable whether it is right to place the life of the healthy parent in jeopardy, particularly in view of the foregoing.

Convicts, volunteering freely, constitute another type of unrelated donor which has been used to a limited degree. Some argue that such persons may derive therapeutic benefit to their self-esteem and sense of worth by being permitted to make a free sacrifice of this type. In the past, it was the practice sometimes to grant pardons or reduced sentences to prisoners who consented to medical experimentation on themselves, but this was rightly condemned by Claude Bernard.[3] In 1963 Starzl[4] appealed to the Colorado State Prisons for volunteer kidney donors on the understanding that no pressure be placed on the volunteers, no pay be offered, and that there be no promise of reduction in sentence. Some 100 men volunteered. This use of penal volunteers was severely criticised on the grounds that it would inevitably lead to abuse if applied broadly across the country, and that a person under restraint cannot be presumed to consent. Also, it is not ethical to deprive a prisoner of a large number of his consents and then confer upon him a consent which is not for his own benefit.

From time to time the question arises concerning financial compensation of a living donor. Even though there is a precedent, relating to blood transfusions, it is universally held that the sale of organs is to be condemned. Trafficking in organs apart, it is germane to ask whether the donor is not entitled to refund of his out-of-pocket expenses, such as lost wages or medical or hospital bills. Some maintain strongly that he should be entitled at least to disability insurance at the expense of a state medical-care system, if such exists, and that he should be entitled to free care for the rest of his life if complications develop as a result of his donation.

The development in the recipient of disease transmitted from the donor, such as infectious hepatitis or carcinoma, raises additional problems. One would think that a free gift would carry immunity from suit against the donor, but actions might well be brought for negligence against the physician or transplantation team, and the hospital in which the transplant was carried out, unless the permission slip was drawn up very carefully.

Cadaver Grafts

The use of cadaver blood for transfusion has long been practised in the U.S.S.R., but the use of deceased donors for organs, such as the kidney, at first did not seem promising. Renal tubules are very sensitive to ischaemia and hypoxia, are subject to rapid autolysis, and were not expected to survive. In point of fact, this prognostication was not strictly true. With the use of refrigeration and hyperbaric oxygen, cadaver kidneys may retain their viability up to 48 hours, or perhaps even longer. In some cases it would appear that early tubular necrosis occurs but is followed by rapid and satisfactory regeneration. As indicated above, statistics vary, but Kincaid-Smith *et al.*[5] reported cadaver-graft survival for six months or more in 11 out of 14 patients (78%). This contrasts favourably with a report from the Kidney Transplant Registry on the survival of grafts from related but not identical living donors.[6] Furthermore, deceased donors can yield both kidneys, and, clearly, single organs such as the heart or liver can be taken only from the dead.

If transplantation of organs from dead donors is to be contemplated, it is essential to reduce to a minimum the interval between death and the removal of the organ. In the case of the kidney, if this is not taken within one hour of the donor's death its viability decreases rapidly, even when it is transferred subsequently to a refrigerated hyperbaric oxygenator. In the case of bone or skin this period may be extended to twelve hours, but with heart or liver, it may be even more critical. Apart, then, from the difficulty of supplying suitable spare parts, the time requirement poses at least two additional problems related to law and ethics: delineation of the moment of death, and procurement of permission for surgical removal of tissue as soon thereafter as possible. In many ways these two requirements are in conflict; understandably, a donor or his next of kin will be less willing to give consent for post-mortem operation if he pictures the transplantation surgeon standing in the wings with knife poised, asking of the attending staff: "Surely he's dead now?"

Definition of Death

There are many forms of death — intellectual death, death of conscience, death of the soul, living death, physiological death, and cytological death. I well recall the shock I experienced while performing an autopsy, during which I made a frozen section of suspected bronchogenic carcinoma, and observed ciliary action in the bronchial mucosa; and when an undertaker telephoned me in the middle of the night because the body he was embalming had started to breathe again. The transplantation of tissues from non-living donors demands our absolute conviction that the person is surely dead; the question of whether the cells are fully viable, important though it is, can never be of an importance equal to this.

Dorland's Illustrated Medical Dictionary[7] defines death as "Suspension or cessation of vital processes of the body, as heart beat and respiration." This conventional definition is no longer adequate, now that these two functions can be carried on by artificial means almost indefinitely — and, some of us would maintain, almost indecently. Is death, then, to be defined as the moment at which irre-

versible damage to the brain has occurred? Surely not, since patients who have suffered such severe brain destruction from trauma or a vascular accident that they live only at a vegetative level may retain cardiac and respiratory functions and "survive" for weeks, months, or years. The French are so sensitive to this problem that until 1947 it was illegal in France to perform an autopsy less than 24 hours after death had been pronounced, unless a notarized medical certificate, stating that decomposition was so advanced as to require earlier autopsy, was submitted to the Mayor or Chief of Police of Paris for his authorization. In 1948 the Minister of Health authorized autopsy earlier than 24 hours in certain French hospitals, if, in addition to the clinical signs of death, two designated physicians together performed three arteriotomies on different parts of the body, and, preferably, if then they injected an ammoniacal solution of fluoroscein and waited 30 minutes before ruling that there was no tincture of the conjuctivae or skin. Before we dismiss this caution as extreme, we should do well to ask ourselves if, had we made a tissue bequest, we would rather die in a French or, say, a South African hospital.

Some biologists accept one minute of EEG silence as incontrovertible proof of death. Others feel that the EEG should be followed for at least an hour. Mollaret and associates[8] described two cases of barbiturate poisoning in which the EEG tracing was flat for several hours; both patients recovered completely.

It seems that both Church and State consider the definition of death to be a matter which must be solved entirely by medicine. In 1957, pronouncing with relative clarity on the matter of resuscitative measures, Pope Pius XII stated categorically that the Roman Catholic Church has never attempted to delineate the moment of death and does not feel competent to do so. In a written parliamentary answer in the House of Commons of Great Britain in March, 1968[9], the Minister of Health, reporting on a ministerial conference on the transplantation of organs, stated: "The Conference agreed that no attempt should be made to lay down a legal definition of death, or rules which doctors should observe in reaching what must be a clinical decision.

Unfortunately, there is no universal consensus by medicine on this matter at present. Alexandre[10] recommends five criteria, all of which he demands must be met: (1) Complete, bilateral midriasis; (2) Complete areflexia, despite painful stimulus; (3) complete absence of spontaneous respiration, five minutes after mechanical respiration ceases; (4) falling blood pressure, despite large doses of vaso-pressives; (5) flat EEG. Revillard adds two more;[11] (6) non-perfusion of the brain, as judged by angiography; (7) absence of reaction to atropine.

When to Disconnect the Respirator

Extraordinary measures to prolong vegetative life are not justified, though experience in a large general hospital leads one to wonder seriously whether it is possible any longer to die without sustaining rib fractures. In cases of irreparable cerebral damage the time comes when the attending physician, in consultation with the relatives, must decide to turn off the respirator: this is quite distinct from the matter of tissue donation, and it must be kept so. Cadaver donation, however, poses an additional problem in relation to the time at which these extraordinary measures should be discontinued. Specifically:

(a) Should the time when the respirator is disconnected be related in any way to the proposed transplant manoeuvre?
(b) May the donor organ be removed while the heart-lung machine is in operation?

To protect the doctor – patient contract, and also to guard in every way against placing the welfare of the post-mortem donor in a jeopardy to which a non-donor would be immune, some hold strongly that not only should the transplant surgeon have no dealings with the prospective donor during life, but also that he should not even be aware of his identity before his death. This is hardly practical and not medically desirable at present, as it would greatly hamper current tissue-typing techniques. Probably it is wise, however, that the surgeon have no part in the decision to disconnect. Once the decision has been made, is it ethical for the transplant surgeon either to be informed of the time in advance or to ask that it be delayed until he can make adequate preparations? Again, there are some who hold that both are contrary to high medical ethics. I believe that many agree that it would be ethical to advise the surgeon of the decision to discontinue resuscitation and that this decision would not be carried out until he was prepared.

If, then, as a result of proper consultation between the relatives, the attending physician, and the transplant team, it is decided to discontinue resuscitative measures at 10.00 a.m., may the surgeon ethically remove the organ at 9.30 a.m., or must he wait until 10.05 or, perhaps, 10.30? Again, opinion is fragmented on this question. Some consider a person with absent reflexes, dilated pupils and absent brain waves as an already-dead artificial heart – lung preparation; they would not hesitate to remove not only a non-vital organ, such as the kidney, but also the heart or the liver. If one looks at the matter in a coldly scientific manner, there is much support for this view. In a case described by Bertrand *et al.*,[12] autopsy showed a degree of autolysis of the entire brain and spinal cord which suggested that death had occurred a week before cessation of resuscitative measures. The heart and lungs of some victims of the guillotine were maintained for days

after decapitation. Other transplant surgeons would not hesitate to remove one kidney while the heart–lung machine was in operation, but would not be so cold-blooded as to remove both kidneys, the liver, or the heart. However, unless one is prepared to remove the heart from these patients there is no justification in removing a kidney – such a person either is truly dead or he is dying, and, surely, to mutilate the dying is the most profound transgression of the physician's code of ethics. Current practice in most centres, but by no means all, is to turn off the machine and to wait a decent interval until all vital signs are clearly absent. This is commendable and is, I believe, acceptable to the church, to the law, and to the general public as well. What is less clear perhaps is whether it is then morally justifiable to reconnect the pump oxygenator with 100% oxygen administered endotracheally for preservation of the viscera intended for transplantation.

Many donor kidneys are obtained from patients who have undergone unsuccessful open-heart operations. When the surgeon is unable to re-establish a functional heart beat, may he remove the kidneys, liver or lungs while heart machine is still running, or must he stop it first? The latter alternative seems preferable on ethical and moral grounds.

The Mechanics of Donation

Civil law as practised in continental Europe and elsewhere, and the common law operative within the British Commonwealth and the U.S.A., conflict over the legal status of the dead. In France, for example, despite the stringent requirements for the pronouncement of death and the strictures regarding donation of tissues by the living, no permission is required to perform an autopsy and there is no restriction on the retention of tissues for any purpose. In the 'common law world', ponderous machinery starts in motion immediately death is pronounced, and the legal status of the deceased becomes hemmed in by all sorts of restrictions, which vary from country to country and differ for each state, province, and county.

The English ecclesiastical courts initiated a concept that there are no property rights in the dead human body. Private rights, belonging to the next of kin, cover only the matter of a decent burial, though even these rights must give way to the recognized interests of the public in cases where death occurs as a result of communicable disease; in suspicious circumstances; within 24 hours of admission to hospital or soon after surgical operation or the administration of any type of anaesthetic; if the patient was not seen by a doctor in the year before death; or if the death may be the subject of litigation under workmen's-compensation or life insurance clauses. In many regions adults may indicate the manner in which they wish their remains disposed of, such as by cremation or by donation to the cause of science, but this wish can be over-ruled by the next of kin. Chayet suggests that autopsy permission may not be legal in Massachusetts unless *all* of the next of kin have given their consent.[13]

The right to perform an autopsy does not include the right to remove organs for transplantation purposes. The person who has the right to possession of the body for burial purposes is entitled to receive it in the same condition as when death occurred, unless this right is modified in a manner authorized by law, and he can recover damages from anyone who performs an unauthorized autopsy or operation on it, mutilates it, dissects, or removes any part without his consent.

When the clinical value of corneal transplantation became evident, in the early years of this century, people began to indicate their desire to donate their eyes after death. As the deceased has no post-mortem rights in his own body, it became necessary to enact specific legislation. In Britain this resulted in the Corneal Grafting Act, 1952. New Brunswick passed a similar Act in 1957, followed by Alberta, Newfoundland, Nova Scotia, Ontario and Prince Edward Island in 1960, British Columbia and Manitoba in 1961, and the Northwest Territories and the Yukon in 1962.

In 1961 a Human Tissue Act was introduced in Great Britain to permit the donation of body parts other than eyes, and in 1962 Ontario passed a provincial Human Tissue Act which was a model for virtually identical legislation in New Brunswick and Nova Scotia in 1964.[14] Parallel but somewhat different legislation was passed in Newfoundland and Alberta in 1967. The other Canadian provinces have not yet amended their Corneal Transplant Acts, and Quebec has passed no legislation on the subject. The Human Tissue Act of Ontario was amended in 1967 to authorize permission by the next of kin, in some circumstances, during terminal illness.

In some regards our provincial Tissue Acts are superior to the Act of Great Britain, which requires that donor organs cannot be removed without authorization of the next of kin. In Alberta, New Brunswick, Newfoundland, Nova Scotia, and Ontario, the administrative head of the hospital may authorize the carrying out of the donation, and the next of kin does not have the power of veto — even though he, and not the hospital, is lawfully in possession of the body. In Great Britain, after death the next of kin must be found and asked to ratify the donor's wish: this inevitably results in loss of vital minutes or even hours.

In the U.S.A. the situation is chaotic. Most states have legislation covering tissue donations after death, but in Alaska, Georgia, New Jersey and West Virginia this is limited to eyes only and there are no provisions for even corneal transplantation in Delaware, Hawaii, Idaho, New Hampshire, Ohio, Utah, Vermont, Wyoming, or Puerto Rico. In Tennessee, the donee must be specified. In most

states the instrument of donation must be in writing and must be witnessed by two persons, but in Massachusetts three witnesses are required and in Maryland the document must be notarized. In Alabama, Connecticut, Iowa, and Minnesota, donation can be made only by will or deed. The next of kin can overrule the donor's instructions in Maryland and cannot in Mississippi, Nebraska, Pennsylvania, or Tennessee. There are no regulations regarding the conduct and licensing of tissue-storage banks in approximately two-thirds of the states. Only in Kansas and Maryland is provision made specifically to exclude the attending physician from being a member of the transplant team.

To reduce confusion and to ensure maximal benefit from modern advances, the National Conference of Commissioners for Uniform State Laws are considering a Uniform Anatomical Gift Act, which was presented for discussion at their 77th Annual Meeting in 1968. In tentative drafts of their proposals[15], the Commissioners took particular pains to codify the persons who may execute such a gift, the persons who may be donees, the manner in which the gift may be executed (verbal donation is not considered), how the document should be delivered and filed, and the rights and duties of the donee.

From the point of view of tissue transplantation, which after all are their *raisons d'être*, the Canadian Acts have several advantages both over statutes operative elsewhere and over the proposed Uniform Anatomical Gift Act, being relatively uncluttered and devoid of legal impediments which could defeat their purposes. In contrast to some other statutes, however, they place considerably more importance on the good faith and ethics of the doctor. For example, in Canada no legal Will is required, the written donation need not be witnessed, verbal donation is permitted, specific organs are not spelled out in the Acts (though the donor may so direct if he wishes), and there are no statutory regulations concerning who may accept the gift, other than that "the body or its parts" be used for therapeutic purposes or for the purposes of medical education or research. On the other hand, in contradistinction to many State statutes in the U.S.A. and the proposed Uniform Anatomical Gift Act, the Canadian Acts make no provision for the setting up or supervision of tissue banks; this imprecision may be fraught with potential danger.

In a country such as North America, where people frequently change their domicile, it may not be easy to know who is a donor. In Maryland and Kansas there is provision for donors to carry special cards in their wallets indicating their willingness to donate, and the Canadian Institute for the Blind issues similar wallet cards. The Automobile Association of Great Britain recently recommended that this system be used more widely. Such cards may not have universal appeal; a prospective donor may feel that if he is involved in a serious accident while carrying such a document, his medical attendants will not have the same interest in keeping him alive if someone else will benefit from his death.

In May 1968 it was reported[16] that the Czechoslovakian Ministry of Health had ruled that a special team of physicians who may not be connected with the transplantation team, acting on a unanimous agreement, will decide when to terminate support in hopeless brain-damage cases. Unless the deceased had indicated in writing that he did not wish his body to be used for medical purposes, organs may be removed as soon as possible after death is certified. No permission is necessary from the relatives.

These Czech proposals demand careful scrutiny. Here we have, in many ways, the ideal legislation from the point of view of tissue procurement and solution of all of the points considered previously, Legally, the "grey zone" is resolved, delay is minimized, the chances of non-donation are cut to the minimum. There is no reason why moral or ethical codes need be transgressed in any way. But how coldly scientific it reads – thoroughly distasteful to our way of thought; herein lies the danger of seeking all solutions by way of legislation. There is, I believe, considerable merit in avoiding complete codification. With adequate safeguards provided by responsible administration of hospitals or institutions, separation of the fields of action of the therapeutic and the transplantation personnel, mandatory consultation by senior medical personnel, and the demand for the strictest moral code from the doctors, there is no need to enact legislation to define when resuscitative measures should cease; such attempted legislation serves only to alarm the public unjustifiably and to distort the public image of the healing physician. It may be difficult to decide on a universally applicable definition of death, but this is a matter for medicine to decide, not the law; even the Czech law does not attempt it. The suggestions of Alexandre[10] and Revillard[11] provide helpful guidelines, but, in the words of Daube[17]: "Under the classical definition of death, which should not be lightly discarded, an irreversibly unconscious person whose life depends on a machine is still alive. The doctor may be right to stop the machine and let him die. But until death occurs, interference with his body is illicit: it is not a corpse."[17]

In March, 1968, Sir Gerald Nabarro introduced a bill before the British Parliament to "permit removal from the body of a human person, duly certified as dead, any kidney or kidneys required for medical purposes, unless there is reason to believe the deceased, during his lifetime, had instructed otherwise."[18] Sir Gerald did not propose that similar permissive legislation be extended at that time to include other body parts, although in much of the world this would not be considered a very revolutionary step to take. In many countries pro-

tected by civil law, there is no restriction on which tissues may be removed at autopsy, and in Australia autopsy is permitted automatically, unless there is reason to suspect that the patient had not wished it to be carried out. This new renal-transplant proposal in Britain, and the practice in the civil-law world whereby tissue donation after death is permissible automatically unless objection has been lodged, add valuable provisions. It has been suggested that the rights of the next of kin should be respected within reasonable and pragmatic limits. This is not an easy requirement to meet, as the next of kin, in practice, must make their objection within the time limit acceptable for adequate success of the graft – and for some organs this is of the order of 15 minutes. This gives scant time for post-mortem *permission* by the next of kin, but it does not seem unreasonable to suggest that, if they wish to register a *veto*, the next of kin could do so in most cases during the last illness, without offending propriety. It is one thing to approach the relatives of a dying person with a request for tissue donation and quite another to ask them to indicate that they do not subscribe to a rule generally accepted by the majority of the public. One suspects, that some relatives who wish to deny permission might be overawed by the medical hierarchy and hesitate to avail themselves of the power of veto. It is a moot point, however, in the case of death of a person of legal competence and who has not objected to donating his organs for the treatment of sick persons, whether his surviving relatives should have the right to deny the donation.

CONCLUSIONS

Despite phenomenal advances, organ-transplantation surgery is only on the threshold of its potential, but already profound problems have arisen as a by-product of the exponential growth of modern medical technology.

Although future potential may be found in cybernetic prostheses on the one hand, or in xenogenic grafts on the other, practical organ replacement in man at present requires a human donor.

There is reason to believe that, in the near future, living donors will be used only for isogenic transplants; cadaveric transplants are now sufficiently successful that it is questionable whether volunteer allografts are ever justified.

The use of cadaver grafts requires precise delineation of death. Resolution of this question cannot be found in the realms of pure philosophy, religion, or law, and must be decided by the strictest application of medical ethics, preferably in an international forum.

The time requirements for maintenance of organ viability are so stringent that it is widely recognized, not only by medicine, but also by lawmakers and by the general public as well, that some transplantation surgeons may be guilty of overhasty action. It is essential that both the sick person and medicine itself be protected from such an eventuality by complete separation of the field of action of the attending physician from that of the transplantation team, and by legal requirement of death certification by more than one senior physician in cases of proposed removal of body tissues after death.

The fact that time is of the essence virtually rules out post-mortem donation by the next of kin. Only in Ontario is there legislative provision for ante-mortem donation by the relatives of non-donors.

In Great Britain it is proposed that permissive legislation be enacted in regard to kidney transplants, but, in opposing this Bill, Mr. Eric Ogden, the Member for West Derby, Liverpool,[19] asked that the status of certain possible donors be clarified. Mr. Ogden was particularly concerned with the very young, the very old, the feeble in mind, and prison inmates, and asked whether they would be excluded automatically from the provisions of the Bill. These provisions are now an integral part of the Bill as amended by committee (Appendix A). It will shortly be presented for its third reading.

The technical details of tissue transplantation are being refined in research centres across the globe by the best minds in our profession; it is high time all of us devoted some thought to the legal and ethical implications of these advances. □

References

1. **Liljekvist, L.**: General health and renal function in kidney transplant donors 8-30 months after nephrectomy. *Scand. J. Urol. Nephrol.* 1:156, 1967.
2. **Murray, J. E.**: *in* (Ciba Foundation Symposium) Ethics in Medical Progress: with Special Reference to Transplantation, ed. by G. E. W. Wolstenholme and M. O'Connor. Churchill, London, 1966, p. 18.
3. **Bernard, C.**: An Introduction to the Study of Experimental Medicine. Transl. by H. C. Greene. New York, Macmillan, 1927, p. 101.
4. **Starzl, T. E.**: *in* reference No. 2, p. 75.
5. **Kincaid-Smith, P., Marshall, V. C., Mathew, T. H., Eremin, J., Brown, R. B., Johnson, N., Lovell, R. R. H., McLeish, D. G., Fairley, K. F., Allcock, E. A.,** and **Ewing, M. R.**: Cadaveric renal transplantation. *Lancet* 2:59, 1967.
6. **Murray, J. E., Barnes, B. A.,** and **Atkinson, J.**: Fifth Report of the Human Kidney Transplant Registry. *Transplantation* 5:752, 1967.
7. Dorland's Illustrated Medical Dictionary, 24 ed. Saunders, Philadelphia and London, 1965, p. 387.
8. **Mollaret, P., Goulson, M., Rapin, M.,** and **Pocidalo, J. J.**: Personal communication, cited by J. Hamburger: *in* reference No. 2, p. 69.
9. Annotation. Transplantation of organs. *Brit. Med. J.* 1:833, 1968.
10. **Alexandre, G. P. J.**: *in* reference No. 2, p. 69.
11. **Revillard, J. P.**: *in* reference No. 2, p. 71.
12. **Bertrand, L., Lhermitte, F., Antoine, B., Ducrot, H.**: Necroses massives du systeme nerveux central dans une survie artificielle. *Rev. Neurol.* 101:101, 1959.
13. **Chayet, N. L.**: Law-Medicine Notes; Consent for Autopsy. *New Eng. J. Med.* 274:268, 1966.
14. Revised Statutes, Nova Scotia (1964) 13 Eliz. II, chapt. 5.
15. Department of Health, Education, and Welfare, U.S. N.I.H., Bethesda, Md. (Legislative Reference and Liaison Branch): Personal communication.
16. Annotation: MD's will Define Death under new Czech Rule. *Canad. Doctor* 34:24, 1968.
17. **Daube, D.**: *in* reference No. 2, p. 191.
18. House of Commons Official Report (Gt. Britain): *Parliamentary Debates* 762: Col. 810, 1968.
19. House of Commons Official Report (Gt. Britain): *Parliamentary Debates* 762: Col. 830, 1968.

APPENDIX A: RENAL TRANSPLANTATION BILL, THE HOUSE OF COMMONS, WESTMINISTER, 26 JUNE, 1968.

A
BILL
(AS AMENDED BY STANDING COMMITTEE C)
TO

Permit removal from the body of a human person, duly certified as dead, of any kidney or kidneys required for the direct purpose of saving the life of another sick human being unless there is reason to believe that the deceased during his lifetime had instructed otherwise and to establish a Central Renal Registry.

Be it enacted by the Queen's most Excellent Majesty, by and with the advice and consent of the Lords Spiritual and Temporal, and Commons, in this present Parliament assembled, and by the authority of the same, as follows:—

1. Subject to section 3 of this Act, nothing in the Human Tissue Act 1961 shall apply to renal transplantation.

2. It shall be lawful to remove from the body of a human person, duly certified as dead, any kidney or kidneys required for the direct purpose of saving the life of another sick human being, unless there is reason to believe that the deceased during his lifetime had instructed otherwise.

3. Section 2 of this Act does not apply to any person who is:—

(*a*) mentally insane, or
(*b*) mentally handicapped, or
(*c*) below the age of 18, or
(*d*) 65 years old or more than that age, or
(*e*) deprived of his liberty by the conviction and judgment of a British Court, or
(*f*) a permanent resident of a hostel home or institution for the aged, or the disabled, or the handicapped.

4. For the purposes of section 2 of this Act, a death certificate must be signed by not less than two medical practitioners, one of whom shall have been registered for at least five years, other than the surgeon conducting the renal transplantation.

5. For the purpose of section 2 of this Act, the qualified medical practitioner responsible for the welfare and safety of the donor or potential donor must be a person other than the qualified medical practitioner responsible for the welfare and safety of the recipient or potential recipient.

6. No person shall be under any duty, whether by contract or by any statutory or other legal requirement, to participate in any treatment authorized by this Act, to which that person has a conscientious objection.

7. —(1) The Minister of Health shall within three months of the passing of this Act establish a Central Renal Registry whereby any objector to the transplant of his kidneys may duly register at such Central Registry in a form to be decided by the Minister.

(2) Any objection to the removal after death of his kidneys, and such information as to objectors and kidneys, shall be available on demand to any hospital in the United Kingdom of Great Britain and Northern Ireland, and such information shall be treated as sufficient evidence of an instruction for the purposes of section 2 of this Act.

(3) Nothing in this section shall cause any expenditure falling on public funds.

8. This Act shall not come into force until the passing of three calendar months from the date on which the Act receives the Royal Assent.

9. This Act may be cited as the Renal Transplantation Act 1968.

Renal Transplantation

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In 1954 a kidney was transplanted successfully between identical twins[1]. Between 1954 and 1962 many attempts were made to extend this initial success to grafts between genetically disparate donor-recipient pairs, using whole-body irradiation to suppress the immune response. With few exceptions the attempts ended in failure, and it was not until the introduction of immunosuppressive agents that any degree of success attended kidney transplantation. Meanwhile, long-term haemodialysis had become available and was used increasingly to keep patients alive until a kidney became available for transplantation. A further significant step was the use of anti-lymphocyte serum to prolong the acceptance of homografts, and this has been followed by the formulation of techniques for matching the tissues of donor and recipient. The prospective use of typing antisera is expected to improve the clinical results still further.

It is estimated that approximately five or six patients per 100,000 population require, and are suitable for renal transplantation[2]; in the Atlantic Provinces this would mean that 90 to 100 patients each year could benefit from the procedure. Patients who require kidney transplantation are those with irreversible renal failure and without other lethal disease; the relative contraindications of disease of the lower urinary tract, diabetes or extremes of age are no longer valid. Renal transplantation is still, however, an extraordinary means of treatment, and the results obtained must justify the investment of money and manpower that such a programme entails.

Table I

Estimated survival rate of transplanted kidneys at one year.

DONOR	SURVIVAL AT ONE YEAR
Monozygotic twin	90%
Sibling	78%
Parent	71%
Other blood relative	61%
Cadaver	45%
Unrelated living	23%

(From the Sixth Report of the Human Kidney Transplant Register, 1968.[3])

Table I shows recent mean figures for one-year survival of transplanted kidneys. However, many individual centres are reporting higher survival figures for cadaver kidneys, some approaching 80%, while the figures for patient survival are considerably higher, especially for those given cadaver organs. The kidney survival rate at 2 years is only slightly less than at one year in the living-donor group, but significantly less at two years in the cadaver group. It is hoped that in cadaver transplants, prospective typing and matching will result in survival figures approaching those for grafts from living relatives.

Tissue Typing

Except for identical twins, each individual is genetically unique. Tissue grafts are recognized as foreign and are ultimately rejected, and each succeeding graft from the same donor is rejected more quickly. The majority of the body's cells contain distinctive antigenic protein complexes, probably located in the cell walls, which distinguish one person's cells from those of another. There is a spectrum of antigenicity, red blood cells containing the fewest and skin cells the most expressed antigenic groups, with heart, liver, and kidney, in ascending order of antigenicity, in between. The majority of these antigens, and probably all of those important in transplantation, are present on the white blood cells; therefore, because they are easily obtainable, lymphocytes have become the standard test cell. Since the ABO blood-group antigens are present on tissue cells, the rules of blood transfusion apply to organ transplantation also. At least 14 additional antigens have been found on lymphocytes, and probably there are many minor antigens that have not yet been identified.

To detect antigens it is necessary to procure antisera. These are obtained usually from multiparous women, who have been exposed to foetal cells which contained antigens inherited from the father but not present in the mother. Antisera can be obtained also from volunteers who have been exposed repeatedly to cells from a single donor, and from patients who have had many blood transfusions. However, the latter source is less satisfactory, because of the multiplicity of donors. Because each cell contains many antigens, and because these antigens probably exist as complexes rather than singly, it is well-nigh impossible to obtain serum that is mono-specific (*i.e.*, contains antibodies against only one antigen). However, serial absorptions against different cell types can reveal sera with limited specificity, and cells can be typed fairly accurately if the sera panel is large enough.

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Antigenic determinants are inherited according to Mendelian laws. If a patient's cells have a major antigen which is present also, on his mother's cells the chances are that the minor antigens too (which are undetectable at present) will be the same in the mother – and, for the same reason, in the siblings. However, this may not be true for an unrelated person who has the same major antigen; the minor antigens complexed to the major may be entirely different, and probably are in most instances. Therefore, a recipient of the same major antigenic type as a potential cadaver donor is likely to have numerous minor undetected mismatches; whereas, when a parent or sibling is the prospective donor, the match is likely to be closer. Therefore, transplantation of a kidney from a well-matched living related donor is more favourable at present than an apparently similar match with a cadaver donor.

In addition to sero-typing, direct cross-matches must be made with donor cells and recipient sera. During long-term haemodialysis the recipient is transfused with blood from many donors. Some of the white cells in the transfused blood may resemble those of the prospective donor, and antibody against these cells may develop in the recipient and may attack the transplanted kidney and cause hyperacute rejection. To avoid this, many dialysis centres now transfuse these patients with suspensions of washed red blood cells only.

Preparation of Recipient

Most patients who require kidney transplantation have glomerulonephritis and the majority of the remainder have terminal pyelonephritis. Other disorders for which renal transplantation is performed include bladder-neck obstruction, congenital renal hypoplasia, cortical necrosis, cystic disease, Wilm's tumour, injury to or removal of a solitary kidney, Kimmelstiel-Wilson syndrome and nephrosclerosis. Since these patients are almost invariably in the terminal stages of uraemia, peritoneal or haemodialysis is instituted. It is now thought that bilateral nephrectomy should precede transplantation in all patients with infected kidneys or glomerulonephritis. In this latter instance, anti-kidney antibodies which are present in the serum immediately after nephrectomy can cause glomerulonephritis in the 'new' kidney if this is implanted too soon; a delay of 6–8 weeks between the two procedures is necessary to allow the antibody titre to fall[4].

Secondary hyperparathyroidism is present in approximately 20% of these uraemic patients[5]. It is essential that the majority of the hyperplastic tissue be removed before receipt of the transplanted kidney.

Donor Requirements

Living donors must be in good general health and free from transmissible disease, such as infectious hepatitis, or urinary-tract disease. The ABO blood group of donor and recipient must be compatible. Evaluation is carried out in hospital and includes aortography to outline the renal vessels.

The same requirements of blood-group compatibility and freedom from transmissible disease apply to *cadaver* donors. Patients dying of cancer other than of the central nervous system and those suffering from a prolonged agonal state, with hypotension and anuria, must be excluded in the selection of donors. The kidneys must be harvested within an hour after death, preferably within minutes. If heart, liver and lung also are to be used, it is necessary to maintain respiration and cardiac action after brain death until these organs are removed. Acute tubular necrosis rarely develops in kidneys removed under such artificially maintained conditions.

Post-operative Course and Management

All recipients are treated with Imuran (Azothioprine), which suppresses the immunologic mechanism, and usually prednisone, which helps to reverse the rejection process. Antilymphocyte serum is also given by most workers and a recent report[6] suggested that this agent is most efficacious when its administration is started before grafting. The precise regimen used varies, and much research is in progress to define treatment schedules.

Anuria due to acute tubular necrosis develops in approximately 50% of cadaver grafts and may persist for as long as 30 days, but rarely occurs in kidneys from live donors. This complication is important, not only because the patient must be maintained on haemodialysis during the anuric period, but also because it is then difficult to diagnose rejection reactions. An increase in blood urea nitrogen and serum creatinine values, with decrease in urinary output and urine osmolarity and the development of fever, leucocytosis and swelling of the kidney, indicate rejection. Such episodes are usually reversible with high-dose steroid therapy.

Complications are frequent and are mainly the result of rejection or of immunosuppressive therapy. Ureteric leaks occur in 5–10% of cases and are fatal in many. Opportunistic infections, especially with coliform organisms, yeasts and fungi, associated with bone-marrow aplasia due to immunosuppressive agents, rejection, and uraemia, may result in death, even when dialysis is reinstituted and the transplanted organ is removed. All of the known corticosteroid complications have been described in transplanted patients. Despite these and a host of less-common problems, the majority of patients survive[7], and one recent report recorded 100% patient survival at one year[8].

Kidney transplantation is far from perfect as a form of therapy at present, but it offers hope of life to those who, without it, have none. With the immunology barriers being battered down slowly in the research laboratories, it may be that the transplantation of organs will become a common surgical procedure. □

References

1. **Murray, J. E., Merrill, J. P., and Harrison, J. H.:** Renal homotransplantation in identical twins, *Surg. Forum* 6: 432, 1955.
2. **Gottschalk, C. W.:** Report of the committee on chronic kidney disease. Sept. 1967.
3. **Murray, J. E., et al.:** World-wide results. Sixth Report of the Human Kidney Transplant Registry. Reported before the second International Congress of the Transplantation Society. New York, 1968.
4. **Dixon, F.:** Role of kidney transplantation in the study of renal disease. Presented before the Second International Congress of the Transplantation Society. New York 1968.
5. **Katz, A. I., Hampers, C. L., Wilson, R. E., Bernstein, D. S., Wachman, A., and Merrill, J. P.:** Place of subtotal parathyroidectomy in management of patients with chronic renal failure. *Tr. Am. Soc. Artif. Int. Organs*, 14: 376, 1968.
6. **Alexander, J. L., Macdonald, A. S., Kay, R. E., Busch, G. J. Monteiro da Cunha, J. E., Birtch, A. G., and Murray, J. E.:** Antilymphocyte globulin pretreatment combined with azathiprine in the prolongation of dog renal allografts. *Surg. Forum*, 19: 188, 1968.
7. **Hill, R. B., Jr., Dahrling, B. E., Starzl, T. E., and Rifkind, D.:** Death after transplantation. An analysis of sixty cases. *Am. J. Med.* 42: 327, 1967
8. **Hume, D. M.:** Symposium on kidney transplantation. Second International Congress of the Transplantation Society, New York, 1968.

Public Health News

Drug Action Committee Organized

A drug action committee, composed of government and non-government persons interested in the field of drugs, has been organized.

Under the chairmanship of Greg Donovan, Nova Scotia's Youth Commissioner, and Rev. Bruce Atkinson, supervisor of alcohol and drug education for the Nova Scotia Department of Education, this committee is concentrating on the problem of drug abuse in the Halifax-Dartmouth area.

Drug Statement Sent To School Teachers

A copy of a statement on drugs taken from the new elementary school health guide has been distributed to all Nova Scotia school teachers.

The statement outlined the common symptoms of drug abuse and how to identify the glue sniffer, the marijuana user, the depressant abuser, the stimulant abuser, the narcotic abuser, and the hallucinogen abuser.

A memorandum enclosed with the statement says it is being distributed because "the problem of drug abuse among school children in Nova Scotia is said to be serious."

The memorandum, signed by Dr. H. M. Nason, deputy minister of education, Dr. J. S. Robertson, deputy minister of public health, and G. L. Donovan, commissioner of youth, cites a report that "a large number of school age children in Halifax have been affected by this problem." It is known, it says, "that a large number of other areas have the same problem."

The statement and memorandum were released through the Publication and Information Section of the Nova Scotia Department of Education.

Canadian Public Health Association

The Canadian Public Health Association plans to hold its annual convention in Halifax May 20 to 23, 1969. The convention will be taking place at the Hotel Nova Scotian.

More than 600 persons active in the field of public health across Canada are expected to attend.

Program details and registration costs are available from the Canadian Public Health Association, 1257 Yonge Street, Toronto, Ontario.

Notifiable Disease Statistics

	Nova Scotia		Canada	
	1968	1967	1968	1967
Brucellosis	—	1	21	43
Diarrhoea of newborn	1	1	28	21
Diphtheria	—	—	59	41
Dysentery	1,785	2,173	3,827	4,377
Encephalitis, infectious	—	2	13	14
Food poisoning	273	174	2,723	2,764
Hepatitis, infectious	226	284	10,297	8,244
Meningitis	20	21	167	175
Meningococcal infections	8	3	94	105
Impetigo of newborn	6	46	10	47
Whooping cough	59	463	2,434	4,954
Poliomyelitis	—	—	—	2
Scarlet fever, streptococcal sore throat	1,108	867	13,206	20,121
Typhoid	1	—	87	124
Venereal diseases	293	391	23,951	24,696

(Taken from the Dominion Bureau of Statistics) □

MEDICAL-LEGAL ENQUIRIES

IAN MAXWELL, M.B., Ch.B.

Dead or Alive?

Q.: *Several times recently I have been asked by lay persons whether there is any legal definition of death. I understand that criteria for "brain death" are now considered to be important, but do these carry any legal weight?*

A.: The Canadian Medical Association is aware that new criteria for death have been needed for some time. This has been more apparent as advances in surgical techniques and medical knowledge have resulted in the practical applications of organ transplantation. As a result, the Association has approved the following *Statement on Death* by the World Medical Association in Sydney, Australia in August 1968:

> "The determination of the time of death is in most countries the legal responsibility of the physician and should remain so. Usually he will be able without special assistance to decide that a person is dead, employing the classical criteria known to all physicians.
> Two modern practices in medicine, however, have made it necessary to study the question of the time of death further:
>
> (i) the ability to maintain by artificial means the circulation of oxygenated blood through tissues of the body which may have been irreversibly injured, and
>
> (ii) the use of cadaver organs such as heart or kidneys for transplantation.
>
> A complication is that death is a gradual process at the cellular level with tissues varying in their ability to withstand deprivation of oxygen. But clinical interest lies not in the state of preservation of isolated cells but in the fate of a person. Here the point of death of the different cells and organs is not so important as the certainty that the process has become irreversible by whatever techniques of resuscitation that may be employed.
>
> This determination will be based on clinical judgement supplemented if necessary by a number of diagnostic aids of which the electroencephalograph is currently the most helpful. However, no single technological criterion is entirely satisfactory in the present state of medicine nor can any one technological procedure be substituted for the overall judgement of the physician. If transplantation of an organ is involved, the decision that death exists should be made by two or more physicians and the physicians determining the moment of death should in no way be immediately concerned with the performance of the transplantation. Determination of the point of death of the person makes it ethically permissable to cease attempts at resuscitation and in countries where the law permits, to remove organs from the cadaver provided that prevailing legal requirements of consent have been fulfilled."

Suggested Aids to be Used in Determining Death:[1]

(a) **Unreceptivity and Unresponsitivity of the Patient**

In irreversible coma, there is a total unawareness to externally applied stimuli and inner need and complete unresponsiveness. Even the most intensely painful stimuli evoke no vocal or other response, not even a groan, withdrawal of a limb, or quickening of respiration.

(b) **No Movements or Breathing**

Observations covering a period of at least one hour by physicians is adequate to satisfy the criteria of no spontaneous muscular movements or spontaneous respiration or response to stimuli such as pain, touch, sound, or light.

After the patient is on a mechanical respirator, the total absence of spontaneous breathing may be established by turning off the respirator for three minutes and observing whether there is any effort on the part of the subject to breathe spontaneously. The respirator may be turned off for this time provided that at the start of the trial period the patient's carbon dioxide tension is within the normal range, and provided also that the patient had been breathing not more than 40% oxygen for at least ten minutes prior to the trial.

(c) **No Reflexes**

Irreversible coma with abolition of central nervous system activity is evidenced in part by the absence of elicitable reflexes.

The pupils will be fixed and dilated and will not respond to a direct source of bright light. Since the establishment of a fixed, dilated pupil is clear-cut in clinical practice, there should be no uncertainty as to its presence. Ocular movement (to head turning and to irrigation of the ears with ice water) and blinking are absent. There is no evidence of postural activity (decerebrate or other). Swallowing, yawning, vocalization are in abeyance. Corneal and pharyngeal reflexes are absent.

As a rule the stretch of tendon reflexes cannot be elicited, i.e. tapping the tendons of the biceps, triceps, and pronator muscles, quadriceps and gastrocnemius muscles with the reflex hammer elicits no contraction of the respective muscles. Plantar or noxious stimulation gives no response.

(d) **Flat Electroencephalogram**

Of great confirmatory value is the flat or isoelectric EEG.

It is assumed that the electrodes have been properly applied, that the apparatus is functioning normally and that the person in charge is competent. It is prudent to have one channel of the apparatus used for an electrocardiogram. This channel will monitor the ECG so that, if it appears in the electroencephalographic leads because of high resistance, it can be readily identified. It also establishes the presence of the active heart in the absence of the EEG. It is recommended that another channel be used for noncephalic lead. This will pick up space-borne or vibration-borne artifacts and identify them. The simplest form of such a monitoring noncephalic electrode has two leads over the dorsum of the hand, preferably the right hand, so the EEG will be minimal or absent. Since one of the requirements of this state is that there is no muscle activity, these two dorsal hand electrodes will not be bothered by muscle artifact. The apparatus should be run at standard gains of 10 microvolts/mm, or 50 microvolts/5mm. Also, it should be isoelectric at double the standard gain, which is 5 microvolts/mm or 25 microvolts/5mm. At least ten full minutes of recording are desirable.

(e) **Coma**

All of the above tests should be repeated at least 24 hours later for cases of coma of unknown origin. The validity of such data as indications of irreversible cerebral damage depends on the exclusion of two conditions:

(i) Hypothermia (temperature below 90°F (32.2°C).)

(ii) Central nervous system depressants such as barbiturates.

(f) **Additional Tests**

Other criteria which have been proposed have been

1. Falling blood pressure despite large doses of vasopressives[2]
2. Non perfusion of the brain as judged by angiography
3. Absence of pupillary reaction to atropine[3]
4. Performance of multiple brain biopsies showing generalized cytological death of cerebral tissue[4]

At a *Symposium on Tissue Transplantation* held during the Dalhousie University Medical School Centennial, under the chairmanship of Dr. Francis Moore, three of the five members of the Panel, namely Doctors Moore, Curran and MacCleave, agreed that under the criteria set out by the World Medical Assembly, it would be ethical to remove the still-beating heart. The Reverend MacCleave was particularly forceful as follows:

> "You wouldn't be asking these questions unless you believed that life lived in the heart . . . . . This is not true, life is not in the heart; the heart is nothing but another organ, and morally and ethically if I have a transplant of any organ of my body, this is acceptable to the Judeo-Christian faith."

And again:

> "There is no moral implication or involvement here, and it is necessary that medicine and theology change the concept of society that the heart is life. It is perfectly all right as far as the moral situation is concerned to remove the beating heart from a dead body."

There is an additional guideline in the report of the ad hoc committee of the Harvard Medical School which is not included in the C.M.A. Statement on Death, but which is of such importance that I should like to see a recommendation from The Medical Society of Nova Scotia go

forward to the C.M.A. regarding it. I quote it in full:

> "It should be emphasized that we recommend the patient be declared dead before any effort is made to take him off a respirator, if he is then on a respirator. This declaration should not be delayed until he has been taken off the respirator and all artificially stimulated signs have ceased."[1]

Unless the physician observes this precaution, he will be laying himself open to possible charges of homicide as otherwise he will be turning off the respirator on a person who is, under the present strict, technical application of law, still alive. □

I.M.

References

1. **Ad Hoc Committee on Brain Death, Harvard Medical School:** "A Definition of Irreversible Coma", *J.A.M.A.* **205:** 337, 1968.
2. **Alexandre, G. P. J.:** *Ethics in Medical Progress*, ed. Wolstenholme, G. E. W. and O'Connor, M.; J. & A. Churchill (London), 1966, p. 69.
3. **Revillard, J. P.:** *Ibid.*, p. 71.
4. **Camps, F. E.:** "Defining Death", *Science Journal*, June 1967, pp. 81–84.

EXTRACTED FROM

THE TIMES

I Richard Armour of Ringwood, Hants, being of sound mind fully endorse the sentiments of Jack Sykes of Orkney, hereby declare that at the point of near extinction or absolute death no medical man has the authority or power to cut open my body for removal of heart, liver, lungs or any other part thereof, nor do I wish the parts of any monkey, gorilla, ape or human transplanted into my being should I be in need of same, but wish to be left alone intact to die in peace. – *The Times* personal column.

1969

SUMMER MEETING

Kentville, N.S.

June 25, 26 & 27

Rupture of the Uterus and Hemorrhagic Diathesis

Reprinted from The Canadian Medical Association Journal, Vol. 94. p. 1314, June 18, 1966

A 28-year-old white married woman with two living children and pregnant for the third time was admitted to hospital at term at 11:00 a.m. October 20, 1965, because of hypertension, proteinuria, and abnormal fetal presentation. When admitted to hospital she was not having any uterine contractions. The cervix was 4 cm. dilated, her blood pressure was 140/90 mm. Hg, and her pulse was 84/min.

At 11:15 a.m. (15 minutes after admission) the membranes were artificially ruptured; the amniotic fluid was thick, greenish and plentiful. The fetus was presenting as an anterior face and the fetal heart rate was 114/min. At 1:00 p.m. the patient had uterine contractions every four minutes and at 1:25 p.m. an oxytocin (Pitocin) intravenous infusion was started. The cervix was fully dilated at 2:25 p.m. but the fetal heart was inaudible. The obstretrician attempted unsuccessfully to convert the face presentation to a vertex presentation, and a trial forceps procedure was also unsuccessful. The obstetrician was of the opinion that the fetus was dead, and he did an internal podalic version and extracted a stillborn fetus at 3:15 p.m. There were two loops of cord around the neck of the fetus. The patient bled moderately and went into shock shortly after the delivery. The uterus and the vagina were packed with gauze.

At 4:00 p.m. rupture of the uterus was diagnosed and a laparotomy was performed. At the operation there was no free blood in the peritoneal cavity; however, there was a 5-cm. tear in the left lower uterine segment involving the left uterine vessel. Arteries on both sides of the uterus were ligated and a subtotal hysterectomy was performed. Hemostasis was difficult; the surgeon felt that this was due to a clotting defect, as the patient had received seven units of blood up to this time.

After the operation the blood pressure was 90/60 mm. Hg, and the patient was transferred to the intensive care unit, where a medical consultation was requested.

At 9:30 p.m. (approximately four hours postoperatively) the internist recommended that if the patient needed additional transfusions she should receive 10 c.c. of 10% calcium gluconate with every third transfusion. Up to this time she had received 12 units of blood and 3 g. of fibrinogen. The internist also advised that the intake and output of fluid be closely recorded and that hexahydric alcohol (Mannitol) and large doses of broad-spectrum antibiotics be given. At 10:00 p.m. a thrombin time test (Fibrindex) was normal and a blood volume determination showed a deficit of 1880 c.c.

At 12:15 a.m. October 21, 1965 (approximately seven hours postoperatively), the patient was bleeding continuously from a drain that had been left in the abdominal incision as well as from the vagina. Blood had to be given constantly to maintain the blood pressure. Up to this time she had received 14 units of blood and at 1:00 a.m. gastric suction was initiated with a Levin tube because of progressive abdominal distension. The patient had received 21 units of blood in the first 12 hours postoperatively. At 3:45 a.m. vitamin K_1 (Aqua-Mephyton) was given and 1800 c.c. of blood was removed through a transabdominal puncture.

A second laparotomy, approximately 13 hours after the first, revealed massive intraperitoneal hemorrhage. All vascular pedicles were checked, no specific bleeding points were found and the hemorrhage was considered to have resulted from afibrinogenemia. A vaginal examination at this time revealed a cervical laceration which was bleeding profusely. At the completion of the second laparotomy the patient had received a total of 33 units of blood. Her blood pressure was 120/80 mm. Hg and the renal output was satisfactory.

The patient became disoriented, febrile and unconscious after the second operation. She was seen by a hematologist 24 hours after the second laparotomy, and he diagnosed a thrombocytopenia due to multiple transfusions and suggested that the patient be given 500 c.c. of fresh blood. The patient's right side began to twitch continuously, with deviation of the eyes and mouth to the right, as well as clonus of the right leg and arm approximately 40 hours after the second laparotomy. A diffuse cerebral hemorrhage was diagnosed because of these neurological signs. The patient developed hematuria, epistaxis, gastric hemorrhage as evidenced by blood through the gastric Levin tube and a bleeding time of 14 minutes.

A tracheotomy was performed about 60 hours after the second laparotomy, and ventilation was assisted with a Bird respirator because of increasing cyanosis and convulsions. The temperature rose to 105° F. and persisted despite the use of a refrigerated mattress. The patient continued to deteriorate and died 82 hours after the delivery.

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*This series of articles arranged by an editorial subcommittee of the C. M. A. Committee on Maternal Welfare, and originally published in the Canadian Medical Association Journal, is being reproduced in the Bulletin at the request of The Medical Society of N. S. Committee on Maternal and Perinatal Health, by kind permission of the Editor of the Canadian Medical Association Journal.

A complete autopsy was performed and revealed a hemoperitoneum of 1500 c.c.; acute tubular necrosis; infarction of the anterior lobe of the pituitary; diffuse cerebral ischemia; left cerebral hemorrhage with rupture into the subarachnoid space; cerebral edema; pulmonary edema; and ruptured uterus.

Decision of the Provincial Committee On Maternal Welfare

The conclusions reached by the Provincial Committee on Maternal Welfare after a review of the case were:

"This is a preventable direct maternal death. The following professional factors are enumerated. It was an error to induce labour by amniotomy with a face presentation. Stimulation of labour by oxytocin in the presence of a face presentation was contraindicated. Internal podalic version is an outdated, dangerous obstetrical procedure which should be condemned because of its well-known association with rupture of the uterus. A second laparotomy should have been performed sooner than 12 hours after the first operation, as continuous massive blood replacement was necessary to maintain the blood pressure and continuing intraperitoneal hemorrhage was obvious hours before the second laparotomy. Total hysterectomy and bilateral ligation of the internal iliac vessels in the presence of unsatisfactory hemostasis, preferably at the first laparotomy or definitely at the second laparotomy, would probably have prevented this maternal mortality. This patient's hemorrhagic diathesis should have been more thoroughly assessed and treated.

"This maternal death has been considered to be ideally 'preventable' under the terms of reference of the Provincial Welfare Committee and there is no implication of any negligence."

DISCUSSION

If possible, rupture of the membranes before or during labour should be avoided with face presentations. When the anterior face presentation was recognized after the membranes had been ruptured, the labour should have been allowed to progress normally and the uterine contractions should not have been enhanced by an oxytocin intravenous infusion. In the absence of cephalopelvic disproportion the majority of anterior face presentations deliver spontaneously. It should be stressed, however, that with posterior face presentations, or where the chin lies behind the transverse diameter, death of the infant is a certainty unless a Cesarean section is performed.

The two loops of the cord around the fetal neck probably were the major cause of the intrauterine death of this fetus. The fetal heart should have been frequently monitored during labour for evidence of fetal distress. The fetus apparently died during the oxytocin stimulation of labour, and increasing fetal bradycardia probably would have been detected by more frequent recordings of the fetal heart sounds. A Cesarean section done at this time for fetal distress would have prevented this maternal death.

Since the fetus was presumed dead, the haste to deliver this patient by forceps immediately after full cervical dilatation was unnecessary. If labour had been allowed to proceed normally in the absence of disproportion, labour might have terminated spontaneously or the presenting part might have further descended into the pelvis and a successful forceps delivery accomplished. If neither of these had occurred because of disproportion, a Cesarean section, even with the dead fetus, was preferable to either an internal podalic version or craniotomy because of the associated maternal trauma so well demonstrated by this case.

This patient had a lateral tear in the lower uterine segment which extended inferiorly, involving the lateral aspect of the cervix. A total hysterectomy was indicated. When a primary uterine rupture occurs, as in this case, it is often impossible to control the bleeding in the pelvis by performing a total hysterectomy. The anatomy is distorted owing to the hemorrhagic infiltration of the pelvic tissues. The best available surgical assistance is necessary, and not infrequently the only surgical procedure that will control the multiple bleeding sites in the pelvis is bilateral ligation of the internal iliac vessels. The abdomen should not be closed until the operators are sure that there is no bleeding and a relatively normal maternal blood pressure has been established.

In addition to inadequate surgical hemostasis, this patient developed a progressive hemorrhagic diathesis. It appears that the nature and degree of this diathesis were inadequately assessed and treated throughout the illness. Considering its early development in association with considerable shock and tissue damage, the chances are extremely high that the initial problem was an afibrinogenemic and/or fibrinolytic syndrome. This condition could have been diagnosed and adequately followed at the bedside simply by the repeated observations of venous blood clotting times. When this condition is recognized, 6 or 8 g. of fibrinogen should be administered initially and more given if and when abnormal clotting reappears.

Undoubtedly, at a later stage (probably only a few hours later), the defective hemostasis was further aggravated by the reduction of platelets and other clotting factors which resulted from the combined effects of the massive blood replacement and the suspected afibrinogenemic and/or fibrinolytic syndrome. In this situation in similar cases, fresh blood in plastic bags or siliconized bottles, corticosteroids and platelet concentrates (if available) must all be used as indicated. In addition, if fibrinolysis is demonstrated, epsilon aminocaproic acid (Amicar or Caprocid) should be considered.

Summary

A maternal death was reviewed in which the cause of death was hemorrhagic diathesis initiated by tissue injury, massive blood loss and shock following rupture of the uterus. □

Pulmonary Function in Sarcoidosis

The most serious cases of sarcoidosis involve the respiratory system. Pulmonary function studies should, therefore, be undertaken in patients with this disease, particularly since functional changes do not always correlate with radiographic clearing.

The respiratory system is the one most frequently involved in sarcoidosis, a granulomatous, inflammatory, systemic disease of unknown etiology. Deaths from the disease are usually secondary to diffuse pulmonary fibrosis. The fibrosis may eventually lead to fatal hypoxia and carbon dioxide retention, i.e., respiratory insufficiency.

Cor pulmonale may develop, hastening death. Factors which may lead to pulmonary hypertension and perhaps cor pulmonale include distortion and destruction of the pulmonary vascular bed by granulomatous and fibrous tissue, and polycythemia. A particularly important factor is the development of hypoxia, which causes reflex vasoconstriction of the pulmonary vasculature. Hypoxia acting alone or interacting with diminished pulmonary vascular bed and polycythemia may produce pulmonary hypertension.

Because an impaired respiratory system is the most common cause of physical disability in patients with sarcoidosis, the physician should understand the pathophysiology of pulmonary sarcoidosis and the value of pulmonary function studies in following the course and management of patients with this disease.

Pathology

Pathologically sarcoidosis is a granulomatous disease. On microscopic examination, the granulomas are composed of large pale-staining epithelioid cells and may contain giant cells. In contrast to tuberculosis, the granulomas in sarcoidosis have little or no peripheral cuffing with nonspecific inflammatory cells; they do not caseate and seldom coalesce. They may resolve completely or leave a residual of hyaline or fibrous tissue.

Grossly, pulmonary sarcoidosis may show gray-yellow, firm, small nodules, fibrosis with honeycombing, emphysematous beds, and/or bronchiolectasis.

The granulomas tend to form around lympathics in peribronchial, perivascular, and subpleural areas, but may also be in the alveolar lumen, bronchial, or vessel wall. With peribronchial and perivascular involvement, the mucosal and endothelial surfaces are preserved.

Four distinct intrathoracic patterns can be seen radiographically. These are hilar adenopathy without pulmonary parenchymal involvement; diffuse pulmonary disease without lymph node enlargement; a combination of hilar adenopathy and diffuse parenchymal disease; and pulmonary fibrosis.

Hilar adenopathy is often considered a benign manifestation of sarcoidosis. While the majority of patients with this type of sarcoidosis show improvement or complete resolution, a number have functional abnormalities during and after resolution of the adenopathy.

Not only are decreased static lung volumes and decreased pulmonary compliance found in some patients, but the pulmonary diffusing capacity may also be decreased in patients with bilateral hilar adenopathy. Specific compliance, defined as pulmonary compliance divided by functional residual capacity, may be normal.

Decreased static lung volumes, decreased compliance with normal or abnormal specific compliance, and decreased pulmonary diffusing capacity are frequently seen also in patients with diffuse parenchymal infiltrates, with or without adenopathy. The degree of abnormality is not necessarily more severe than in patients with adenopathy alone. Roentgenographic clearing is not always accompanied by physiologic improvement. The amount of functional impairment may not correlate well with the extent of radiographic change. This lack of correlation also applies to patients with hilar adenopathy without parenchymal infiltrates.

Severe Fibrosis

Parenchymal fibrosis is the most severe manifestation of pulmonary sarcoidosis. It is in patients with this type of disease that morbidity and mortality are highest. In these patients, too, decreased static lung volumes, decreased compliance with relatively normal or abnormal specific compliance, and impaired diffusing capacity are the most common functional abnormalities. These patients have the greatest degree of functional impairment.

Functional abnormalities consistent with obstructive airway disease have been reported with all stages of pulmonary sarcoidosis, but are not common. They may represent chronic obstructive airway disease coexisting with pulmonary sarcoidosis

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Robert B. Packer, M.D. The *Ohio State Medical Journal*, December, 1967.

[1]Reprinted from the Abstracts of the National Tuberculosis Association, May 1968.

Printed through cooperation Nova Scotia Tuberculosis Association.

or may reflect peribronchiolar involvement with granulomatous or fibrous tissue.

Decreased lung volumes are presumably a consequence of replacement of normal alveoli by granulomatous and fibrous tissue.

Replacement of normal lung with granulomatous and relatively inelastic fibrous tissue is probably the cause of decreased compliance and specific compliance when abnormal.

Pulmonary diffusing capacity is influenced by (1) the average thickness of the pulmonary membrane; (2) the surface area available for diffusion, (the number of functioning alveoli in contact with functioning capillaries), and (3) the nature of the alveolar-capillary membrane. Destruction and thickening of the alveolar-capillary membranes as well as destruction of the capillary bed have been demonstrated microscopically. Both of these alterations could theoretically reduce diffusing capacity. Abnormal ventilation-perfusion relationships caused by perfusion of poorly compliant, poorly ventilated areas are also responsible for decreased diffusing capacity.

Spontaneous Clearing

In evaluating the effect of steroid therapy on pulmonary sarcoidosis, it should be kept in mind that 71 per cent of the patients with hilar adenopathy will have some spontaneous clearing within two years and that about 50 per cent with pulmonary infiltrates with or without adenopathy will show spontaneous improvement within one year. Striking improvement may also occur in the radiograph unaccompanied by improvement in pulmonary function.

Patients with hilar adenopathy and pulmonary infiltrates with or without adenopathy usually show an increase in static lung volumes and compliance with treatment. Those with pulmonary fibrosis appear to have fixed abnormalities. Abnormal pulmonary diffusing capacity as a rule does not improve; when it does, it seldom returns to normal. There appears to be no conclusive evidence that steroid therapy alters the long-term prognosis of sarcoidosis.

It is important to remember that patients with hilar adenopathy alone do demonstrate abnormalities of pulmonary function and that structural changes can occur in the lung without being detected by X-ray. □

Personal Interest Notes

Dr. M. M. Davis, Halifax, elected president of **Halifax Infirmary Medical Staff.** Dr. A. B. Crosby, vice-president; Dr. J. J. McKiggan, secretary - treasurer; past president, Dr. S. T. Laufer.

Dr. Arthur L. Murphy, a member of the **Universities' Grants Committee** since 1963, became first full-time chairman in January '69. Under Dr. Murphy's leadership steps were taken towards co-operation and co-ordination of activities of universities in the Halifax area.

Dr. F. A. Dunsworth — Medical Society president on MSI.

Drs. J. P. Welch, K. Scott and R. B. Goldbloom (Paediatrics) were invited participants in a special conference, sponsored by Queen Elizabeth II Fund, on **"The Future of Paediatric Research in Canada"**, held in Vancouver, B. C., on 18th and 19th January.

Several scientific papers by members of the Department of Pediatrics were presented at the annual meetings of the **Canadian Society for Clinical Investigation** and the **Royal College of Physicians and Surgeons of Canada**, 21-22 and 23-25, January, held in Vancouver. Included: "Cytological investigations in females with coaretation of the aorta," by Drs. J. P. Welch, L. K. McNeil, D. L. Roy and L. Y. Lee; "Cytomegalovirus infection following extracorporeal circulation in children," by Drs. J. Embil, D. F. Folkins, E. V. Haldane, and C. E. van Rooyen. "Serum immunoglobulins in recurrent respiratory infections," by Drs. M. S. DeWolfe, J. Johnson and S. Abraham; "C-reactive protein, and aid to early detection of intrauterine infection," by Drs. M. Prasad and K. Scott; "Screening test for cystic fibrosis in newborns," by Drs. C. T. Gillespie and A. L. Steeves. Other presentations were made at the **Royal College meetings** by Drs. R. C. Dickson, G. W. Bethune, G. T. Gillespie, C. E. Kinley, P. Landrigan and K. Aterman. Also attending the Vancouver meetings were Dr. R. M. MacDonald, Dean of Health Professions; R. O. Jones of the department of Psychiatry and Dr. Paul Nonamaker, Surgery.

Dr. Lea C. Steeves has a new appointment – he is now Associate Dean of Medicine.

Dr. R. N. Anderson (Medicine), as chairman of the Nova Scotia division of the Canadian Heart Foundation, spoke on the importance of continuing heart research, at a luncheon given to open the month-long fund drive.

Dr. J. A. R. Tibbles (Neurology) spoke of preparing a child for school and child achievement in school, at a recent meeting of the Lambda Chapter, Beta Sigma Phi.

Dr. C. B. Stewart (Dean of Medicine) visited Ottawa early in February for a meeting of the Advisory Committee on Public Health Research.

Dr. J. C. Wickwire, Liverpool, attended American College of Cardiology Meetings in New York, Feb. 26th to March 22nd and a two week Refresher Course, Coronary Care Unit, V.G.H. Halifax, during the latter part of March.

Speakers at the **Dalhousie Medical Research Association** supper meeting in February — Dr. P. Landrigan on "Serum precipitins to aspergillus in chronic lung disease"; Dr. I. MacLean on "Growth of a protozoan flagellate".

Dr. Allan Coles (Health Professions, School of Physical Education and Athletics) visited Toronto at the end of January to study physical education facilities in Ontario universities.

New course in Anatomy began January 28th (offered by the School of Physical Education in the Faculty of Health Professions). Dr. R. C. J. Gonsalves, lecturer in anatomy, and Dr. Glen Conly, assistant professor of Physical education, are instructors for the course.

Dr. C. L. Gosse has been elected chairman of the **Nova Scotia Human Rights Federation.**

Retirement: Dr. C. Beecher Weld, professor of Physiology for 32 years, has begun his retirement leave and will complete the balance of the 1968/1969 academic year as visiting professor of zoology at UBC, his **alma mater.** He will return to Halifax in May.

Death: Dr. C. M. Jones, who was chief of Radiology at the Halifax Infirmary and an associate professor at Dalhousie, on 22nd December, 1968. Members of the H.I.M.S. decided to establish an annual award in his memory, to be presented to a final-year student in X-ray technology.

THIS SPACE RESERVED FOR NEWS ITEMS FROM BRANCH SOCIETIES

□

Comitology,

or The Committee-man unmasked.

It is a mark of our society that when something needs consideration, or even—despite cynical remarks to the contrary—actually to be *done*, a committee is formed. It has been said of the average American, for example, that if he were on a plane which was about to crash, he would be moved to form a *Landing* committee. Some of us would think a *Steering* committee more important at this juncture, especially as under these circumstances a *Standing* committee would certainly be of little use; more appropriate still would be the formation by Davy Jones of a *Welcoming* committee.

The question underlying all of this is really how we should make the most—or the least—of committees. It is a fact of life that sooner or later we will find ourselves on committees. Unless we are blessed with congenital committeemanship, most of us have committeemanship thrust upon us, and we can only acquire the aura of this faculty with the painful passage of time. It is therefore useful to consider an approach to the committee life.

We are indebted to Parkinson of Law-fame for outstanding work in this field. His Institute of Comitology has made the kind of contribution to our understanding of buck-passing as a committee gambit which was made in other fields of human endeavour by Potter's school of Lifemanship. Parkinson's formula for the coefficient of inefficiency is widely known; less well recognized is his inspired discovery of the 'd' factor (the distance between the two committee members seated furthest from each other) which raised him to almost Nobelesque stature. His recognition of the number 8 as the ideal make-up of a cabinet (8 being the only number which all existing states had agreed to avoid) is indicative of his understanding of this subject in the international sphere as well.

For the busy doctor/dentist/civil servant/engineer/rodent operator* who is not anxious to specialize in comitology, the advice offered by Chapman is helpful: "Never arrive on time; this stamps you as a beginner. Don't say anything until the meeting is half over; this stamps you as being wise. Be as vague as possible; this avoids irritating others. When in doubt, suggest that a sub-committee be appointed. Be the first to move for adjournment; this will make you popular; it's what everyone is waiting for."

The potential specialist in comitology will, of course, recognize the essence of comitology in this author's reference to the subcommittee. Subcomitology is a highly specialized field, which regrettably has too often been labelled with the tag *reductio ad absurdum* by the uninitiated. Some authorities feel that the mastery of subcomitology is similar to the achievement of *nirvana*, and that a yearning for this high plane is laudable. Certainly for myself the memory of a colleague who had achieved the ability actually to create and dissolve subcommittees at will is very dear.

Somewhat different, and often preferred by those who find that the art of subcomitology smacks too much of just blatant buckpassing and who look for a more positive approach, is another branch of comitology, namely nominational comitology. The use of the nominating committee, or the committee on committees (whose members are of course highly non-paid comitological comitologists) is liked by these specialists because of the absolute power entrusted to them. My own feeling is that such power distracts us from the true aims of comitology and that it does indeed corrupt: mais chacun à son gout.** But whatever aspect of this art is studied by the serious seeker after Truth, it is well to consider the reference (which must surely have been made by a student of Zen) to the committee implicit in the definition of a camel: a horse planned by a committee.

D.A.E.S.

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*Delete whichever you prefer, or don't prefer.

**It is perhaps unnecessary to stress the value to the Canadian comitologist of the necessity for a thorough grounding in bilingualism. Committee reports must be written, in the same way that cereal manufacturers advertize their 'free gifts', both in English and French,–or even Canadian.

The doctor's new self-styled "secretary" typed a testimonial for the secretary who was leaving: "She has handled all of my professional and business affaires very tactfully . . . "

* * *

News Flashes

CANADIAN CANCER SOCIETY

Nova Scotia Division

WELFARE SERVICES AVAILABLE TO CANCER PATIENTS IN THE PROVINCE OF NOVA SCOTIA

It is the present policy to help cancer patients, within certain prescribed limits and without overlapping the work of any other organisation. Each case requiring financial outlay (e.g., nursing or housekeeping care) is treated individually on its merits. These services are supported in part by voluntary contributions to the Canadian Cancer Society.

Cancer Dressings are free to all cancer patients, irrespective of income. They are made entirely by volunteers.

Bedside Nursing Supplies And Loan Equipment given or loaned to patients irrespective of income include Vaseline, Lysol, alcohol, Gatch beds, linen, powder, and paper tissues. Colostomy equipment and supplies are provided in cases of financial need.

Transportation Expenses To Nova Scotia Tumour Clinic. The Society will assist with these expenses for check-up or treatment of all those with cancer who are in receipt of an income of less than $3500 per year and who complete the necessary forms and certificate. Except in special cases, these costs include fare from home of the patient to train or 'bus terminals, and return. (The Society administers this programme with gunds supplied by the Provincial Government.)

Nursing And Housekeeping Services may be allowed (after investigation; circumstances are reviewed by the Welfare Committee every 30 days).

Board And Nursing-Home Costs are accepted by the Society in cases of great need, after investigation into individual circumstances.

Patients' Reception Rooms. Comfortable waiting rooms and light refreshments for out-of-town cancer patients visiting Halifax for treatment are provided without charge at 1485 South Park Street in Halifax. Rooms are open all day (and evening, if required) from Monday to Friday, each week. These services are operated by volunteers.

Miscellaneous Services. Welfare of waiting patients (Nova Scotia Tumour Clinic); invalid foods, in special cases; home and hospital visiting; Christmas boxes, and other services.

Application for these services may be made to the local Unit of the Society or to the Halifax headquarters (Canadian Cancer Society, 1485 South Park Street; tel. 423-6550).

SUPPORT YOUR LOCAL CANCER SOCIETY

FAMILY PHYSICIAN RESEARCH PROJECTS

As a result of a meeting of the National Research Committee of the College of Family Physicians in January in London, Ontario, an organization is being set up in Nova Scotia to facilitate research in family practice—specifically to promote and assist the participation of family physicians in clinical, epidemiological, therapeutic and organizational studies.

At present a Provincial Committee consisting of:

Dr. I. G. MacPherson,
6178 Quinpool Road,
Halifax, Nova Scotia.
Dr. Eugene Nurse,
110 Woodlawn Road,
Dartmouth, Nova Scotia.
Dr. James Fraser,
Sunnyside Shopping Plaza,
Bedford, Nova Scotia.
Dr. Donald A. Weir,
180 Portland Street,
Dartmouth, Nova Scotia.

is engaged in the task of establishing an Advisory Committee of expert persons, lay and medical, to help plan and execute projects in research in family practice.

The Committee would be very grateful to hear from any practitioners in the Province who are interested in planning or participating in research activities.

TO ALL PHYSICIANS:

Re: PREGNANT Rh NEGATIVE PATIENTS

The Rh Immune Serum Globulin is now available for use in Nova Scotia. It is supplied in phials of 1 ml. to be injected intra-muscularly.

The criteria, as determined by the Rh Committee, are as follows:

1.) Rh negative gravida married to an Rh positive husband.
2.) Rh positive baby who is Coomb's negative.
3.) No antibodies in the mother's blood at delivery.

The injection of the immune serum globulin must be given within 48 hours of delivery.

The distribution of the immune serum globulin is through the Rh Committee, and a representative in each of the Medical Society Branch areas:

Dr. J. R. Greening Antigonish	Dr. N. G. Glen Amherst
Dr. F. W. Prince Bridgewater	Dr. D. G. Black Digby
Dr. N. K. MacLennan Sydney	Dr. R. J. Fraser Musquodoboit Harbour
Dr. B. R. Wheeler Truro, N. S.	Dr. C. B. MacLean Inverness
Dr. H. A. Locke New Glasgow	Dr. G. W. Turner Windsor
Dr. W. H. Jeffrey Shelburne	Dr. G. V. Burton Yarmouth

These Laison Officers will be only too pleased to release the phial to you without delay, if the criteria are fulfilled, the accompanying form is completed, and the follow-ups are done.

Because of much voluntary work and help from the Red Cross, Provincial Government and many others, our Province has been able to get this program going before many Provinces in the Country. It is now up to us to see that this disease becomes a thing of the past in Nova Scotia.

Rh Committee of The
Medical Society of Nova Scotia

News Flashes

LAW TO BACK CHILD-PROOF CONTAINER

The federal government has indicated it will back by law the use by manufacturers of an effective child-proof container for pills or other drugs which can be harmful to children.

The matter was raised last month in the House of Commons, when the MP for Wellington-Grey, W. M. Howe, noted that a company in Windsor, Ont., "has offered to the market a virtually child-proof pill container".

He asked that, if the container proves effective, would the government make its use compulsory.

Health and Welfare Minister John Munro replied affirmatively, noting that a recommendation for such a container came from a committee set up by the Food and Drug Directorate of his department.

"We have referred this matter to the specifications committee," said Mr. Munro, "which will set up a subcommittee to consider the specifications for a bottle top.

"When this study is completed, we intend to incorporate the specifications in the regulations of the Food and Drugs Act."

In Canada in 1967 there were 23 deaths among children aged one to four years due to poisoning by solid or liquid substances. There were a further four deaths in the five to 14 age group.

The greatest number of these deaths were due to aspirin and salicylates and other analgesic and soporific drugs.

— *Highway Safety News*

IF IT IS NOT AS IT SHOULD BE

With so many foods being put up in packaged form, we must do much buying on faith – faith in our food and drug laws and faith in the manufacturers and their observance of those laws.

Yet, it sometimes happens that all is not as it should be, and this only comes to light when we open the package — usually when one is preparing a meal. The contents may appear discoloured or spoiled. Insects or other unclean matter may show up in packaged foods. Foods may not be as represented on the label. There may be reason to suspect that fresh fruits or vegetables have been contaminated by insect spray or in some other manner.

The Food and Drug Directorate of the Department of National Health and Welfare urges everyone to report any such irregularities to the nearest Food and Drug office or to the Consumer Division, Food and Drug Directorate, Department of National Health and Welfare, Tunney's Pasture, Ottawa 3, Ontario.

VITAMIN C

Q.: What is the meaning of the label statements "an excellent dietary source" of vitamin C and "a good dietary source" of vitamin C?

A.: When a product is a natural source of vitamin C, these statements are permitted by the F.D.D. regulations under the following conditions:

An excellent source – if the product contains at least 15 mg. of vitamin C in "a reasonable daily intake." This provides one-half of the recommended daily intake.

A good cource – if the product contains at least 7.5 mg. of vitamin C in "a reasonable daily intake." This provides one-quarter of the recommended daily intake.

(Consumer Division, Food & Drug Directorate, Department of National Health and Welfare, Ottawa)

TEENAGE DRUG MISUSE CAUSES WORRY

Warnings have gone out that misuse of the asthma relieving drug Strammonium by teenagers can lead to blindness.

The non-prescription drug does not produce any ill effects if smoked as it is supposed to be, but can be highly dangerous if swallowed.

Such misuse came to light recently in Toronto, when four teenagers were found by police after eating the drug. Two were unconscious when admitted to hospital. There are also records of cases in Kitchener and Peterborough, Ont. Police fear that a fad could develop and have asked pharmacists not to sell Strammonium to young people.

Following the discovery of the four teenagers in Toronto, police raided a home and charged a 17-year-old with criminal negligence and administering a noxious substance.

— *Highway Safety News*

QUOTABLE QUOTES

"I cannot feel that it is a very safe proceeding to turn anyone but an expert loose in the rectum with a pile clamp and a hot soldering iron."— *N. S. Med. Bull.*, 3(9): 35, 1924.

* * *

"For instance, in the blood of babies born by collecting a small capillary tube . . ."—*Proceedings of a recent meeting.*

* * *

"Irregardless of race, colour, creed, and religion."—*C.B.C.*

* * *

Definition of twins: Antenatal womb-mates, neonatal bosom friends.

Definition of a duck: A chicken with snowshoes on.— *Health Rays*, Nova Scotia Sanatorium.

News Flashes

NEW PROGRAM TELLS THE COLLEGE STORY

Doctors are now becoming communications conscious. The College of Family Physicians of Canada shortly begins a program in which specially trained teams will meet members and non-members to discuss, informally, the problems and future of Canada's family doctors.

In the next few weeks, specially trained teams of family practitioners will begin visits around the provinces with the object of further informing members, and non-members, about the College of Family Physicians of Canada, and of the many changes taking place in Canadian Medicine that will influence family practice now and in the future. The teams will visit selected areas of their province, holding several meetings during each trip.

Provincial Presidents have asked members to act as "hosts" at each meeting, and to invite both members and non-members. "These will be small informal meetings of about 15 people, and we expect everyone to participate," says Donald I. Rice, Executive Director of the College. Our teams have had brain storming sessions in which they have covered every possible subject from the philosophy of the College, to the most often asked question "What do I get out of membership?"

The College of Family Physicians of Canada wishes to acknowledge financial support for this program from the Charles E. Frosst Company.

For further information please contact:

C. K. Goodman,
Information Officer,
College of Family Physicians of Canada

FORTHCOMING MEETINGS

5th Annual Meeting of the Canadian Society of Chemotherapy will be held April 17-18, 1969 at the Park Plaza Hotel, Toronto, Ontario.

The 31st Annual General Meeting of the Province of Quebec Medical Association will be held in Montreal, at the Queen Elizabeth Hotel, April 17, 18, & 19, 1969.

First Conference - Canada Safety Council will take place in the Chateau Laurier Hotel, Ottawa, May 4, 5, 6 and 7, 1969. The Canadian Public Health Association Annual Meeting will be held at the Hotel Nova Scotia, May 20th to May 23rd, 1969, Halifax, N. S.

The American College of Physicians announces the following postgraduate courses:

Internal Medicine: Clinical Application of Current Concepts	June 9 – 13
Neurology and the Internist	June 11 – 14
Hematology for Internists with Emphasis on Recent Advances	June 16 – 20
Valvular Heart Disease, The Basis for Selecting Treatment	June 23 – 26

The American College of Cardiology and The Montreal Heart Institute announce recent achievements in Cardiac Surgery: A Medico-Surgical Symposium, June 12, 13 and 14, 1969. To be presented at: The Montreal Heart Institute, 5000 Belanger St., Montreal.

The Medical Society of Nova Scotia will hold their Annual Summer Meeting on June 25, 26 and 27, 1969 in Kentville, N.S.

102nd Annual Meeting of The Canadian Medical Association, 89th Annual Meeting of The Ontario Medical Association will be held in Toronto, Ontario on June 9-13, 1969.

Canadian Association of Physical Medicine and Rehabilitation, 17th Annual Meeting, August 21, 22, 23, 1969 to be held in Halifax, N. S. For information please write to Dr. W. O. Geisler, Secretary-Treasurer, 153 Lyndhurst Ave., Toronto 4, Ontario.

The College of Family Physicians of Canada - Annual Assembly, Toronto, Ontario. Sept. 29 to Oct. 2, 1969.

Medical Review Literature

SYMPOSIA PUBLISHED IN *THE PRACTITIONER* IN 1968 & 1969

Sept., 1968: Renal diseases
Oct., 1968: Advances in treatment
Nov., 1968: Disorders of the hands and feet
Dec., 1968: Winter ailments
Jan., 1969: Dermatological drugs and dressings

REVIEW ARTICLES

Addiction: Drugs in the treatment of alcoholism. Chaftez, M. E., Med. Clin. N. Amer. 51: 1249–59, Sept., 1967.

The narcotic addict as a medical patient. Sapira, J. D. Amer. J. Med., 45: 555–88, Oct., 1968.

Allergy: Urticaria and angioedema. Thompson, J. S. Ann. Internal Med., 69: 361–80, Aug., 1968.

Burns: Management of the burn patient in a general hospital. Sullivan, M. B., Jr., *et al.* Surg. Clin. N. Amer. 48: 79–86, Aug., 1968.

Cardiovascular and cerebrovascular diseases: Atherosclerosis calls for a new kind of preventive medicine. Hatch, F. T. Calif. Med., 109: 134–45, Aug., 1968.

Recent advances in the medical and surgical treatment of hypertension. Tucker, R. M., *et al.* Med. Clin. N. Amer. 52: 1227–36, Sept., 1968.

Clinical selection of diuretic drugs in the management of cardiac edema. Brest, A. N., *et al.* Amer. J. Cardiol. 22: 168–76, Aug., 1968.

Treatment of the patient with refractory heart failure. Kirkendall, W. M., *et al.* Med. Clin. N. Amer. 52: 1157–82, Sept., 1968.

Cardiovascular aspects of advanced renal disease. Freeman, R. M., *et al.* Med. Clin. N. Amer. 52: 1237–47, Sept., 1968.

Hemorrhagic strokes. Principal causes, natural history, and treatment. Locksley, H. B. Med. Clin. N. Amer. 52: 1193–1212, Sept., 1968.

Emergencies: Fluids for emergency conditions. A review with special reference to disaster situations. Crocker, M. C. Anaesthesia 23: 413–24, July, 1968.

Infectious diseases: Immunization against measles. Freedman, M. L. Med. J. Austral. 2: 230–4, 3 Aug., 1968.

Obstetrics: Natural childbirth. Its origins, aims, and implications. Med. J. Austral. 2: 144–5, 20 July, 1968.

Nausea and vomiting in pregnancy. Fairweather, D. V. Amer. J. Obstet. Gynec. 102: 135–75, 1 Sept., 1968.

Occupational diseases: Occupational health in agriculture. Animal-borne diseases. Steele, J. H. Arch. Environ. Hlth (Chicago) 17: 267–85, Aug., 1968.

Pain: Pain relief with analgesic agents. Batterman, R. C. Dis. Month (DM) 1–43, Aug., 1968.

Pilonidal sinus: A review of the literature and a report of 100 cases. Thomas, D. Med. J. Austral. 2: 184–8, 27 July, 1968.

Postoperative care: Management after massive resection of the intestine. Preston, F. W., *et al.* Surg. Clin. N. Amer. 48: 931–40, Aug., 1968.

Tranquilizers: Prolonged pharmacotherapy and the eye. The antimalarials and the tranquilizers. Rubin, M. Dis. Nerv. Syst. 29: Suppl., 67–76, Mar., 1968.

Trauma: Thoracic trauma. Hughes, R. K. Surg. Clin. N. Amer. 48: 759–71, Aug., 1968.

Vitamins: Nutritional requirements for vitamin B_{12} and folic acid. Herbert, V. Amer. J. Clin. Nutr. 21: 743–52, July, 1968.

Transactions

4th Meeting of Council and 115th Annual Meeting

Medical Society of Nova Scotia

Lord Nelson Hotel – November 22nd and 23rd, 1968

Fourth Meeting of Council - Index

115th Annual Meeting - Index

Fourth Meeting of Council (1968)

INTRODUCTORY NOTES

The 4th Meeting of Council and the 115th Annual Meeting of The Medical Society of Nova Scotia was held in Halifax, Nova Scotia, November 22nd and 23rd, 1968. All business and mixed social activities were held in the Lord Nelson Hotel. Separate functions for the wives took place at the Halifax Infirmary (Gerrard Hall), the Royal Nova Scotia Yacht Squadron and Neptune Theatre. A total of 170 members registered, a good number of wives took part in the activities, 22 Exhibitors had displays and the Press was in attendance throughout.

There were additional business meetings held and these will be reported on separately. They included meetings of the Executive Committee (Annual Meeting – November 21st and 1st Regular Meeting – November 23rd), the Nominating Committee – November 21st and the Committee on Committees – November 22nd and 23rd. In addition, some Sections took advantage of the opportunity and held separate meetings.

The Social activities began with a Reunion Reception, Thursday evening, November 21st. It was well attended and generally regarded as a welcome opportunity to renew acquaintances.

The following day approximately 250 members, wives and guests attended a Luncheon at which Dr. H. D. Dalgleish, President of Canadian Medical Association, addressed the Society. The President's Reception, the Annual Banquet and Ball were held Friday evening. During the Banquet, Senior Membership Citations were bestowed upon Dr. J. W. MacIntosh, Sr., of Halifax and Dr. H. R. Ross of Sydney by Drs. B. J. Steele and A. L. Sutherland respectively. The Past-Presidents, represented by Dr. R. O. Jones, honoured Dr. C. J. W. Beckwith with a presentation for his long and devoted service to the Society.

Dr. A. L. Sutherland delivered his valedictory address, following which Dr. F. A. Dunsworth, the incoming President, presented him with his Past-President's Pin. Mrs. Sutherland was then presented with the Past-President's Wife's Pin by Dr. G. McK. Saunders. Mrs. Sutherland was the first wife so honoured, the award just having been originated this year. Dr. F. A. Dunsworth concluded the official activities for the evening by introducing the new President-Elect, Dr. Lea C. Steeves of Halifax.

Invited guests were:—Dr. H. D. Dalgleish, President, C.M.A.; Dr. A. F. W. Peart, General Secretary, C.M.A.; Mr. B. E. Freamo, Executive Secretary, C.M.A.; Mr. D. A. Geekie, Secretary-Public Relations, C.M.A.; Hon. R. A. Donahoe, Minister of Public Health, Province of Nova Scotia; Mr. R. McD. Black, Chairman, Medical Care Insurance Commission; Mr. S. S. Jacobson, Medical Care Insurance Commission; Mr. J. H. Delaney, Medical Care Insurance Commission; Mr. George Baker, Medical Care Insurance Commission; Mr. D. H. Waller, Executive Secretary, Medical Care Insurance Commission; Mr. Geof Collier, Public Relations, Medical Care Insurance Commission; Mr. W. J. MacInnes, Q.C., Legal Counsel for The Medical Society of Nova Scotia; Mr. S. P. Brannan, General Manager, Maritime Medical Care Inc.; Mr. Stephen Pyke, Chairman, Workmen's Compensation Board; Dr. R. A. Hopper, President, New Brunswick Medical Society; Dr. F. L. Whitehead, Secretary, New Brunswick Medical Society; Mr. Gerald F. Lynch, Executive Secretary, Newfoundland Medical Society; President of Newfoundland Medical Society; President of Prince Edward Island Medical Society; Mr. R. E. J. Ricketts, Executive Secretary, Nova Scotia Tuberculosis Association; Mr. J. A. MacGlashen, Executive Secretary, Nova Scotia Rehabilitation Council; Mr. R. B. Hayward, Executive Secretary, Nova Scotia Division, Canadian Arthritis & Rheumatism Society; Dr. E. L. MacIntosh, President, Nova Scotia Dental Association; Dr. D. C. T. Macintosh, Executive Secretary, Nova Scotia Dental Association; Dr. Enid MacLeod, Secretary, Nova Scotia Division, Federation of Medical Women of Canada; Mr. Ronald Stewart, President, Dalhousie Medical Students Society; Mr. Gordon Macmichael, President, Canadian Association Medical Students & Interns; Mr. Murdock Smith, President, 5th Year Class, Dalhousie Medical Students; Vice-President of 5th Year Class; Mr. Daniel Reid, President, 4th Year Class; Mr. Dow Dorcas, President, 3rd Year Class; Mr. David Gass, President, 2nd Year Class; Mr. W. Edwin Smith, President, 1st Year Class.

The Scientific Programme for the Annual Meeting was the 42nd Annual Dalhousie Refresher Course, November 18th to November 21st inclusive. Joint registration was available in the Main Lobby of the Sir Charles Tupper Medical Building for the Meeting of Council, the Annual Meeting and the Scientific Programme, thus covering the period November 18th to November 23rd inclusive. 66 registered for the Scientific Programme. Of the 125 designated as representatives to Council, 67% registered. Attendance at Sessions of Council ranged generally in the vicinity of 100. The total registration of 170 was an increase of 35 over last year.

FIRST SESSION OF COUNCIL*

Friday, November 22nd.

AC1—The first Session of Council began with welcoming remarks by the Chairman, Dr. A. L. Sutherland, at 9:45 a.m., Friday, November 22, 1968.

AC2—The Executive Secretary read the names of the members deceased between November 7th 1967 and November 21st 1968, as follows: –

Cunningham, A. L., M.D., June 1968
Ezekiel, C. J., M.D., November 1967
Hayes, Kenneth P., M.D., May 1968
MacKinnon, C. G., M.D., June 1968
MacLellan, R. A., M.D., March 1968
Martin, H. J., M.D., November 1967
Meech, L. R., M.D., February 1968

The Chairman requested two minutes silence in tribute to the memory of these members.

AC3—On motion, the applications for membership of the 78 physicians, listed on Page 10 of the Annual Reports to Council, were accepted.

AC4—The Transactions of the 3rd Meeting of Council and 114th Annual Meeting 1967, as printed in the August 1st 1968 issue of The Nova Scotia Medical Bulletin, were adopted.

AC5—The Resolutions Committee, chaired by Dr. C. J. W. Beckwith, had Drs. W. C. Nicholas and J. B. MacDonald as members.

REPORTS OF COMMITTEES & REPRESENTATIVES

AC3—**By-Laws Committee:**—(AR p. 35-36) Chairman, Dr. H. J. Devereux.

The 1st item of business concerned a Notice of Motion re the By-Law Amendments. This notice, published in the August 1968 issue of the Bulletin, read as follows: –

1. THAT the By-Laws of The Medical Society of Nova Scotia be amended as follows:

(A) Chapter II *Objects* – add paragraph 6. Collective negotiation.

(B) Chapter IV Article 4 *Existing Branches* –
Item (a) (i) delete "Shelburne",
Item (a) (iii) delete "the City of Dartmouth",
Add Item (a) (xii) Shelburne Medical Society,
Add Item (a) (xiii) Dartmouth Medical Society.

(C) Chapter VI Article 5 *Discipline of Members* – Delete existing paragraph (a) and substitute following: "Any member whose annual fee is not paid within the first six months of the membership year, may, without prejudice to his liability to the Society, be suspended from all privileges of membership."

(D) Chapter VIII Article 3 *Quorum* – In the first sentence, delete "twenty-five" and substitute "fifty".

(E) Chapter IX Article 3 *Meetings of Council* – Delete existing paragraph (a) and substitute following: "The Council shall convene on the first day of the Annual Meeting of the Society. Immediately following each Session of Council at the Annual Meeting, it shall meet with and report to a plenary Session of the Annual Meeting of the Society.".

(F) Chapter IX Article 3 *Meetings of Council* – Delete existing paragraph (e).

(G) Chapter XVI *Amendments* – In the first paragraph, substitute two months for three months. In the second paragraph, substitute one month for two months.

AC7—The By-Laws Committee Report was tabled at this point as it dealt with essentially the same issue, but included an additional proposed amendment to the By-Laws – "Para. AR170, referring to Chapter IX "Council," Article 2, Item 2(a) xiii – "That this should be so worded that General Practitioner representatives would be allowed alternates in order to ensure full representation on Council'."

AC8—Although it was recognized that this specific proposal could not be effected because of inadequate notice, it was amended for presentation next year as follows: –

AC'68 # 1:
Moved by Dr. H. C. Still
Seconded by Dr. N. G. Glen.
"THAT Para. AR170, Item 2(a) xiii be revised to read, 'that each member of Council may have an alternate to be appointed by the body which he represents'." CARRIED.

AC9—Adoption of the report followed on motion by Dr. H. J. Devereux: –

AC'68 # 2: –
Moved by Dr. H. J. Devereux.
Seconded by Dr. G. McK. Saunders.
"THAT the Report of the By-Laws Committee, as amended by AC'68 # 1 be adopted." CARRIED.

AC10—The Executive Secretary was directed to obtain Governor in Council approval of the approved By-Law amendments.

AC11—**Executive Committee Report:** – (AR p. 11-13) Chairman, Dr. C. E. Kinley.

The Executive Committee has held 6 regular meetings during the past year. The question of Summer Meetings was reviewed by the Executive, and it is apparent that sites other than Digby and Ingonish will require consideration periodically.

AC12—The retirement of Dr. C. J. W. Beckwith as Executive Secretary took effect in early July. His outstanding and faithful work on behalf of the Society will be duly recognized. Dr. Beckwith has assumed the new position of Consultant to the Executive Secretary, and the Society will continue to draw on his extensive experienceand knowledge.

AC13—A Committee on the Secretariat, under Dr. F. G. Mack, presented a comprehensive report to the Executive Committee, which lead to the appointment of Mr. Douglas Peacocke as the new Executive Secretary. The choice was virtually unanimous, and the wisdom of the selection is self-evident. An agreement between the Executive Secretary and the Society was drawn up by Dr. J. A. Myrden, and has been approved by the Executive.

AC14—Medicare discussions have continued throughout the year. The title, composition and terms of reference of the P.S.I. Committee were reviewed by the Executive, and modifications made. These will be elaborated upon by Dr. A. L. Sutherland.

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* AR – Annual Report
AC – Annual Council
AM – Annual Meeting
AE – Annual Executive

AC15—A meeting was held between the Executive and members of the Provincial Medical Board. Mutual interests and problems came to light, and resulted in the establishment of a conjoint committee to review the Medical Act. This committee has been very active, and its findings and recommendations will soon be made known.

AC16—The Executive expressed concern that the members at large were not well enough informed on the Executive business. As a result, the Chairman of the Public Relations Committee was directed to attend all Executive meetings. Appropriate newsletters, including the "President's Letter" were the result.

AC17—The Executive passed a resolution stating "That a Session of the Annual Meeting of The Medical Society of Nova Scotia be held after each Session of Council of the Society".

AC18—Some problems of "Cabinet Solidarity" arose during the year, and resulted in the Executive passing the following resolution: –

RE3'68 # 4:
Moved by Dr. N. G. Glen.
Seconded by Dr. J. B. Tompkins.

"THAT whereas: Resignations from The Medical Society of Nova Scotia under conditions of crisis, suggest to other bodies dissension within the Society, and

WHEREAS: it is the opinion of the Executive Committee that it is not necessary to resign in order to speak as an individual,

BE IT RESOLVED: that these observations be brought to the attention of all present and future officers of the Society." CARRIED.

AC19—The Executive voted $750 to C.A.M.S.I. to help defray the costs of their Annual Meeting, which was held in Halifax in September.

AC20—In reply to a proposal from the Section on Anaesthesia, the Executive approved the following resolution: –

RE4'68 # 4:
Moved by Dr. B. J. Steele.
Seconded by Dr. J. A. Myrden.

Re Terms of Reference – Comm. on Anaesthesia

"THAT a Standing Committee of Anaesthesia Standards be set up by The Medical Society of Nova Scotia, in consultation with the Section for Anaesthesia." CARRIED.

AC21—The Executive approved the formation of the new "Medical-Religious Liaison Committee", after considering the investigations of Dr. D. C. Brown.

The following resolutions were also passed by the Executive:

RE5'68 # 7:
Moved by Dr. J. B. MacDonald.
Seconded by Dr. G. W. Turner.

Re Honouring Wife of Past-President

"THAT The Nova Scotia Medical Society – at its Annual Meeting in November 1968 – initiate the presentation of a gift of lasting quality to the wife of the retiring President and that this become an annual presentation;

BE IT FURTHER RESOLVED THAT the wife of any Past-President be eligible to wear such an insignia; and

BE IT FURTHER RESOLVED THAT a committee be established to proceed with gift selection and implementation of the Executive's decision respecting these matters." CARRIED.

RE5'68 # 18:
Moved by Dr. F. A. Dunsworth.
Seconded by Dr. J. A. Myrden.

Re Mental Health Committee Report

"THAT The Medical Society of Nova Scotia recommend to the Provincial Medical Board to make representation to the Provincial Legislature with the request to draft a Hypnosis Act to regulate and control the use of Hypnosis in this province." CARRIED.

RE5'68 # 19:
Moved by Dr. F. A. Dunsworth.
Seconded by Dr. J. A. Myrden.

Re Dept. of Public Health letter re Immunization Program

"THAT the proposal respecting immunization in the Dept. of Public Health letter of October 4 /68 to The Medical Society of Nova Scotia be referred to the Committee on Child Health and the Section for General Practice to examine all aspects and possible ramifications of such a proposal." CARRIED.

AC22—The Cape Breton Medical Society has discussed with the Executive Committee the desirability of a review of the medical facilities in the Cape Breton area. The Cape Breton Medical Society asked The Medical Society of Nova Scotia to sponsor such a review. The Executive agreed with this unanimously.

AC23—During the year, it has become increasingly obvious that the advent of "Medicare" will not lighten the burden of Society business. There is a need to continually review the committee structure of the Society, to allow effective participation of the physicians of the Province in all aspects of the planning and delivery of health services. Efforts to encourage and assist all committees of the Society in their work should be of great concern to the Officers of the Society, and pertinent proposals are being drawn up by the Chairman of the Executive Committee and the Executive Secretary.

AC24—Recommendation No. 1: – The Executive recommends approval of an application for affiliate status from the Association of Professional Staffs of Mental Health Centres of Nova Scotia. The following resolution was passed: –

AC'68 # 3:
Moved by Dr. C. E. Kinley.
Seconded by Dr. A. J. M. Griffiths.

"THAT the Executive Committee approve Recommendation No. 1 of this report re affiliate status of Association of Professional Staffs of Mental Health Centres of Nova Scotia." CARRIED.

AC25—Recommendation No. 2: - The Executive recommends that Council make a donation towards the furnishing of the new C.M.A. House. This resulted in a Resolution:

AC'68 # 4:
Moved by Dr. G. McK. Saunders.
Seconded by Dr. H. C. Still.

"THAT the Society donation toward the furnishing of the new C.M.A. House be set at $5,000." CARRIED.

AC26—Recommendation No. 3: - The most effective function of all committees is of prime importance to the Society. In this regard, it is recommended that committees be free to sit non-members, including laymen, on an ad hoc basis, but without voting privileges, if they desire.

AC'68 # 5:

Moved by Dr. C. E. Kinley.

Seconded by Dr. A. J. M. Griffiths.

"THAT the Executive Committee approve Recommendation No. 3 of this report re including laymen on an ad hoc basis to committees." CARRIED.

AC27—Medical-Legal Liaison Committee Report: (AR p.22–24) Chairman, Dr. I. D. Maxwell

Dr. Maxwell, in moving the adoption of Recommendation A of his report noted that the Society had previously made its view known to the Attorney-General regarding breath analysis but felt it would be useful to restate its position to encourage increased use of the equipment.

AC'68 # 6:

Moved by Dr. Ian Maxwell.

Seconded by Dr. C. E. Kinley.

"THAT Recommendation A of this report be adopted." CARRIED.

AC28—Recommendation B, which included the proposal to review the Human Tissue Act was questioned. Dr. Maxwell stated that his committee's main objection to the Act was that, at present, it was necessary to indicate verbally or in writing your desire to donate human tissue for transplant. His committee believed this should be the opposite – i.e. one must indicate a desire not to donate.

AC'68 # 7:

Moved by Dr. Ian Maxwell.

Seconded by Dr. H. J. Devereux.

"THAT the report of the Medical-Legal Liaison Committee, including recommendations A & B, be adopted." CARRIED.

AC29—Report of Representative to Kellogg Health Sciences Library (Dalhousie): (AR p. 27–28) Representative, Dr. A. N. Lamplugh

This report was received for information.

AC30—Medical-Economics Committee Report (AR p. 71–72), Chairman, Dr. K. B. Shephard.

This report was accepted for information.

AC31—Dr. Shephard spoke to his report, bringing Council up to date on events occurring since the report was written. He noted that further retroactive payments would be made based on decisions at the next Executive Committee meeting.

AC32—In describing the difficulties he was having with Government in negotiating a more favourable payment for medical services under the Welfare Agreement, Dr. Shephard noted that in the beginning, the concept was joint underwriting of the plan by The Medical Society and the Government. Great changes, political, social, and scope of the Plan, had occurred and necessitated a new basis for payment. It was on this point that the difficulty arose. It may well result that members of the Society who have provided these medical services will have done so at a rate of remuneration less than that to which they were entitled.

AC33—In moving adoption of his report, including the recommendation, Dr. Shephard noted the recommendation is dependent upon Executive decision and therefore not immediately effective. Dr. Tompkins seconded the motion.

AC'68 # 8:

Moved by Dr. K. B. Shephard.

Seconded by Dr. J. B. Tompkins.

"THAT the report of the Medical Economics Committee, including the recommendation, be adopted." CARRIED.

FIRST SESSION OF ANNUAL MEETING

AM1—The first Session of the Annual Meeting took place following the Report of the Medical Economics Committee. One resolution was passed, ratifying actions of Council to this point in the proceedings.

AM'68 # 1:

Moved by Dr. C. L. Gosse.

Seconded by Dr. A. J. M. Griffiths.

"THAT the actions of Council up to the K.P.M. report on the morning of Friday, November 22, 1968 be ratified." CARRIED.

SECOND SESSION OF COUNCIL

AC34—The Second Session of Council began immediately with presentation of the Medical Care Committee Report. Dr. Dunsworth assumed the chair to permit Dr. Sutherland to present his report.

AC35—Medical Care Committee Report: - (AR p. 69–70) Chairman, Dr. A. L. Sutherland.

The report of this committee was distributed by President's Letter # 4 of December 4, 1968.

AC36—Dr. Sutherland presented his report and he was followed by representatives of Kates, Peat, Marwick (K.P.M.), the consultant firm in the employ of the Medical Care Insurance Commission. Their presentation was the Report titled "A Recommended Tariff Under M.S.I." Their presence at Council had been approved earlier by the following motion:

AC'68 # 9:

Moved by Dr. G. McK. Saunders.

Seconded by Dr. Donald Smith.

"THAT the presentation of the consultants report (K.P.M.) entitled "A Recommended Tariff under M.S.I." be presented prior to discussion of the Medical Care Committee's report." CARRIED.

AC37—The meeting adjourned for lunch at approximately 12:30, and reconvened at 2:30, continuing with the Medical Care Committee Report.

AC38—Following lunch, Dr. Sutherland read to Council a letter the Committee had sent to Mr. R. McD. Black, Chairman of the M.C.I.C., in rebuttal to the K.P.M. Report. This letter, using as supporting data reports by (a) Dr. C. B. Stewart, Dean of Medicine; (b) Mr. B. E. Freamo, Executive Secretary C.M.A.; and (c) two members of the Department of Economics, Dalhousie University retained by the Society, questioned the validity of the report on different points.

AC39—Discussion opened with cautious queries as to what should be the best course of action now that the Society had been advised that M.C.I.C. supports the K.P.M. recommendation that the tariff for M.S.I. be 80–85% of the Fee Schedule, and considering that this proposal was unacceptable to the Committee and so reported to Council. The resolutions concerning M.S.I. that had been passed at the Annual (1968) Executive Committee meeting were read at this point; briefly they (1) reaffirmed the stand that the tariff should be 100% of the Fee Schedule, (2) that Dr. G. McK. Saunders be requested to continue service on the Action Committee for another year and, (3) proposed that the Society members be asked to present their intentions regarding opting in or out and supplementary billing. The following motion was passed:

AC'68 # 10:
Moved by Dr. G. McK. Saunders.
Seconded by Dr. C. E. Kinley.
"THAT Resolutions AE'68 # 17, 18 and 23 be adopted." CARRIED.

AC40—The last of these three resolutions reads as follows:
"THAT The Medical Society of Nova Scotia develop a questionnaire, for consideration by individual physicians, which would indicate to the Society and all its members the intent of each physician respecting: – 1. his personal acceptance or rejection of 80–85% of the 1967 Fee Schedule as the tariff, 2. his intention to opt out, 3. his intention to participate in the plan but to bill to the schedule. These questionnaires should be completed and considered at each branch and subsequently forwarded to the central office of the Medical Society." CARRIED.

AC41—A motion was made that Council recommend that members deal directly with their patients and not become participating physicians under the plan. It was felt it would be wise to remain outside pending further developments. An amendment added the option of accepting payment from the plan and billing the patient for the difference between the tariff and the Fee Schedule. The reasoning behind this proposal was to prevent closing the door on negotiations with Government and at the same time providing doctors with remuneration in accordance with the Medical Society Fee Schedule. Discussion was lengthy, the merits of the alternatives were debated. The amended motion ultimately passed at Council, and subsequently ratified at Annual Meeting, reads as follows: –

AC'68 # 11:
Moved by Dr. A. J. M. Griffiths.
Seconded by Dr. H. C. Still.
"THAT council recommend to the members of the Medical Society that they deal directly with their patients after inception of M.S.I. and do not become participating physicians under the plan,
Amended by Dr. C. L. Gosse.
Seconded by Dr. G. McK. Saunders.
or accept the payment by the plan and bill the patient up to the Schedule of Fees."
CARRIED 59–0

AC42—The belief was expressed that up to this point, the Society's public relations had been less than optimum. It was considered essential that the public be made aware of the profession's views and position relating to M.S.I. It was also the wish of the members that discussions with the Medical Care Insurance Commission continue in the hopes of achieving the best possible plan for all concerned. Resulting from these discussions were the following motions: –

AC'68 # 12:
Moved by Dr. H. C. Still.
Seconded by Dr. H. A. Myers.
"THAT consideration be given by the Executive Committee of The Medical Society of Nova Scotia to advertise in the press the current views of the Medical Society in relation to Medicare." CARRIED.

AC'68 # 13:
Moved by Dr. J. B. Tompkins.
Seconded by Dr. A. Prossin.
"THAT the Action Committee meet with the press immediately following this meeting to present the opinions of the Medical Society regarding our views of the Medicare program." CARRIED.

AC'68 # 14:
Moved by Dr. A. J. M. Griffiths.
Seconded by Dr. C. B. Stewart.
"THAT the Action Committee continue its consultations with the Medical Care Insurance Commission." CARRIED.

AC'68 # 15:
Moved by Dr. C. L. Gosse.
Seconded by Dr. F. J. Barton.
"THAT the incoming Executive at its first meeting give consideration to the employment of a part-time lay public relations officer." CARRIED.

AC43—**Nominating Com. Report:** To conclude the days proceedings of Council, Dr. Sutherland presented the Report of the Nominating Committee which was approved by: –

AC'68 # 16:
Moved by Dr. A. L. Sutherland.
Seconded by Dr. D. R. S. Howell.
"THAT the Nominating Committee report be accepted." CARRIED.

AC44—The detailed report is on Appendix "A".

SECOND SESSION OF ANNUAL MEETING

AM2—The Second Session of the Annual Meeting was called to order at this point by Dr. Sutherland requesting endorsement of Council action up to and including the Medical Care Committee Report.

AM'68 # 2:
Moved by Dr. A. J. M. Griffiths.
Seconded by Dr. G. W. Turner.
"THAT the Resolutions of the 2nd Session of Council 1968 be approved." CARRIED.

THIRD SESSION OF COUNCIL

AC45—The Third Session of Council was called to order at 9:15 a.m. on Saturday, November 23.

AC46—**Report from Society Member of Provincial Medical Board / Medical Society Joint Committee:** (AR p. 85–86), Dr. D. R. S. Howell.

Dr. Howell's report summarized events to this point in time and he asked for Society approval of the Joint Committee proposals. Briefly, the proposed changes to the Medical Act considered to be of particular interest were:

a) *Composition of the Provincial Medical Board* – 14 Members – 7 appointed by Governor in Council – 6 elected by Medical Society – 1 appointed by Dalhousie University, from Faculty of Medicine. – *Tenure* – 3 years, eligible for reappointment once only.
b) *Reciprocity* – 1. Registration to be subject to conditions which the Board may perscribe; 2. In general, Board will admit Home list of G.M.C. of Great Britain, National Board of U.S.A., and Medical Council of Canada; 3. Board may admit Commonwealth and Foreign list of G.M.C.
c) *Annual Licensing Fee* – Recommended.
d) *Discipline* – The P.M.B. is granted the right to initiate an investigation into the fitness of a physician to practice medicine.

AC47—Discussion was lengthy, with particular interest being shown in the revised licensing requirements. Dr. M. R. Macdonald and Dr. D. R. S. Howell elaborated on the reasoning and rationale for the changes and satisfied Council that the proposed changes were in the best interests of the public and the profession. Dr. D. C. Brown asked if the committee had given any consideration to including some reference to the legal position of the 3rd year medical student working in community hospitals and if the discussions had included the changing roles of the health team. Dr. Macdonald and Dr. C. Stewart replied that these points were being actively considered. Dr. Stewart spoke of the increasing employment of the medical student in hospitals and particularly in the new Home Care service and noted the increasing responsibility he is assuming. He believed provision for authority to do this is required along with clear definition of responsibility for the student and the supervisors. (Executive Secretary's NOTE: The final version of the Revised Medical Act presented to Government subsequent to the Annual Meeting includes provision for the legal protection of the student and supervisor).

AC'68 # 17:

Moved by Dr. D. R. S. Howell.

Seconded by Dr. G. MeK. Saunders.

"THAT the report of the Provincial Medical Board and Medical Society Joint Committee including paragraphs AR481 to AR484 inclusive be adopted." CARRIED.

AC48—**Report of Representative to Provincial Medical Board:** – (AR p. 37), Chairman, Dr. J. A. Myrden.

This report was accepted for information.

AC49—**Report of Committee on Finance:** – (AR p. 45) Chairman, Dr. J. A. Myrden.

The Committee was asked to take into account impending costs resulting from the approval of a grant to the C.M.A. Furnishing-Finishing Fund, hiring of consultants, and hiring of a public relations expert. Dr. Myrden said that the forecast surplus should take care of some of these costs, particularly if they are expended over several years. The need for increased dues would be examined.

AC50—The Society investments were queried. It was noted that they are under constant review.

AC'68 # 18:

Moved by Dr. J. A. Myrden.

Seconded by Dr. R. O. Jones.

"THAT the Report of the Finance Committee be adopted." CARRIED.

AC51—**Report of the Committee on Hospitals: -** (AR p. 83–84) Chairman, Dr. J. A. Smith.

Recommendations in this report read as follows:

AC52—**Recommendation 1. -** "That the Society make strong representation to the Provincial Government regarding a realistic revision of the hospital grant structure."

AC53—**Recommendation 2. -** "That the incoming committee together with the liaison representative to the Registered Nurses Association investigate the alarming drop in enrollment in Nursing Training Schools in the province.

AC54—Discussion of recommendation # 2 (AR474) brought out the general concern of the membership over the shortage of nurses in training. A resolution passed at the Annual Executive (1968) was tabled for information. It read as follows: "That the Medical Society views with alarm the decline in applicants in the training schools (nurse) in the Province and that the Minister of Health and the Registered Nurses Association start investigative measures and institute concrete drives (such as guidance coucillors, remunerations, etc.) to insure an increase in enrollment for future days." Different points of view as to what action the Society should take were put forward. The report and its recommendations were adopted by:

AC'68 # 19:

Moved by Dr. J. A. Smith.

Seconded by Dr. W. C. Nicholas.

"THAT the Committee on Hospitals Report, including recommendations Para 473 and 474 be adopted." CARRIED.

AC55—**Report of Section For Salaried Physicians: -** (AR p. 76–77) Chairman, Dr. A. W. Titus.

Paragraph AR437 proposed that the Section explore, with The Medical Society of Nova Scotia, the possibility of this Section having an "Associate" membership classification which would not require membership in The Medical Society of Nova Scotia. It was noted that this was contrary to the By-laws as they existed and members who spoke to it expressed the view that it was not particularly desirable. It was referred to the By-laws Committee for consideration.

AC'68 # 20:

Moved by Dr. A. W. Titus.

Seconded by Dr. J. A. Smith.

"THAT the report be accepted, except that para AR437 and para AR438 be referred to the By-laws Committee." CARRIED.

AC56—Dr. Saunders expressed concern that members, perhaps even some Officers of Sections might not be members of the Society and suggested that Chairmen of Sections should look into this matter and ensure that this is not taking place as it is contrary to the By-laws.

AC57—**Report of Editorial Board: -** (AR p. 32–34) Chairman, Dr. I. E. Purkis.

The report contained four recommendations:

AC58—**Recommendation 1. -** "That the Bulletin operate on separate accounting, aiming for a balanced budget with income derived from advertising and a regular grant from membership dues."

AC59—**Recommendation 2. -** "That when the financial position of the Bulletin account permits, the Bulletin should return to monthly publication."

AC60—**Recommendation 3. -** "That the staff of the Medical Society office continue to assist the bulletin in matters of administration, as outlined in sub-sections (a) to (f) of paragraph AR 145 of the report."

AC61—**Recommendation 4. -** "That the Editorial Committee, with the assistance of the Officers of the Society, investigate the possibility of the creation of a Maritime Medical Bulletin through co-operation with the medical societies of other Maritime provinces."

AC62—Following discussion, recommendation # 1 was amended by adding "with continuing supervision of the finance committee" in AC'68 # 21.

AC'68 # 21:

Moved by Dr. A. J. M. Griffiths.

Seconded by Dr. D. R. S. Howell.

"THAT the words 'with the continuing supervision of the finance committee' be added to Para AR157 of the Editorial Board Report." CARRIED.

AC63—The proposal to investigate the possibility of creation of an Atlantic Medical Bulletin, which would result in the cessation of publication of the Bulletin, was discussed at length. The pros & cons were tabled and it was finally resolved that the investigation should be made.

AC'68 # 22:

Moved by Dr. Ian Purkis.

Seconded by Dr. I. D. Maxwell.

"THAT the Editorial Board Report including recommendation 1 as amended and recommendations 2, 3 and 4 be adopted." CARRIED.

AC64—Report of Archives Committee
Report of Cancer Committee
Report of Civil Disaster Committee
Report of Medical Education Committee
Report of Pharmacy Committee
Report of Legislation & Ethics Committee
Report of Physical Education & Recreation Committee
Report of Annual Meeting Committee

AC65—The foregoing reports were received for information by Resolution AC'68 # 23.

AC'68 # 23:

Moved by Dr. C. E. Kinley.

Seconded by Dr. D. R. MacInnis.

"THAT the above reports be accepted for information." CARRIED.

AC66—Report of Committee on Mediation & Discipline: - (AR p. 34) Chairman, Dr. A. L. Sutherland.

This report contained the following recommendation: (AR163) "This committee is a committee of one, namely the President of the Society. It is recommended that it be enlarged to at least three members.

AC'68 # 24:

Moved by Dr. C. E. Kinley.

Seconded by Dr. D. R. MacInnis.

"THAT the Report of the Committee on Mediation and Discipline including the recommendation endorsed at the Annual Executive by AE'68 # 11 be adopted." CARRIED.

AC67—Report of Committee for Child Health: - (AR p. 40–41) Chairman, Dr. B. S. Morton.

Recommendations contained in this report were:

AC68—Recommendation 1. - "It is recommended that The Nova Scotia Medical Society contact the Registered Nurses Association as well as the Hospital Association with a view to establishing a more co-ordinated approach to matters concerning the supply of health care personnel."

AC69—Recommendation 2. – "Whereas Vitamin K, administered to newly born infants, can prevent the major cause of Hemorrhagic Disease of the Newborn, it is recommended that all hospitals in the Province adopt this simple routine procedure. The recommended dosage is 0.5 to 1.0 mgm parenterally, or 1 to 2 mgm orally of Vitamin K1 (or the eqivalent dose of synthetic Vitamin K, 1.25 to 2.5 mgm) as recommended by the American Academy of Paediatrics."

AC70—Discussion of recommendation # 2 resulted in addition of the proviso that the Bulletin be used to disseminate this information to physicians and hospitals.

AC'68 # 25:

Moved by Dr. B. S. Morton.

Seconded by Dr. C. Stewart.

"THAT the Report of the Child Health Committee, including the recommendations as amended be adopted." CARRIED.

AC71—Dr. Reid enquired about the availability of measles vaccine and wondered when it would be available on a province-wide basis. Dr. Robertson replied that, like other vaccine programs, it begins with provision to public clinics and then, as it becomes available it is then provided on a broader scale. Dr. Brown observed that the Section for General Practice had advocated this at its meeting two days before.

AC72—Report of Committee on Maternal & Perinatal Health: - (AR p. 15–21) Chairman, Dr. D. F. Smith.

There were no recommendations in this report and it was received for information. Dr. Still spoke on the great service that Dr. Smith has been performing for the Society.

AC'68 # 26:

Moved by Dr. H. C. Still.

Seconded by Dr. N. G. Glen.

"THAT the Council record its sincere appreciation for the excellent and continued work done by Dr. D. Smith as Chairman of the Committee on Maternal and Perinatal Health." CARRIED. *APPLAUSE*

AC73—Report of Workmen's Compensation Board Liaison Committee: - (AR p. 29) Chairman, Dr. M. E. DeLory

The recommendation in the report was that "The Medical Society of Nova Scotia continue to press for 100% payment according to The Nova Scotia Medical Society Fee Schedule, from the Workmen's Compensation Board."

AC74—Dr. DeLory expressed the opinion that the objective of the resolution might be achieved next year.

AC75—The report, including the recommendation, was adopted.

AC76—Report of Committee for Anaesthesia Standards: - (AR p. 30) Chairman, Dr. D. A. E. Shephard

The report contained the recommendation that Council approve in principle the function of the Committee on Anaesthesia Standards. The report, including this recommendation, was adopted.

AC'68 # 27:

Moved by Dr. D. A. E. Shephard.

Seconded by Dr. F. J. Barton.

"THAT the Report of the Committee on Anaesthesia Standards, including the recommendations, be adopted." CARRIED.

AC77—Report of Representative to V.O.N. Board of Governors: - (AR p. 79–81) Chairman, Dr. G. M. Smith.

In Dr. Smith's absence, Dr. Kinley advised that Dr. Smith's report was really a proposal or outline for further studies and investigation on the subject of effective utilization of para-medical personnel in home care services. The study would be co-ordinated with others dealing with similar problems such as the nursing shortage. The report was accepted for information.

AC78—Report of Committee on Fees:—(AR p. 82) Chairman, Dr. J. H. Charman

Having been received for information, Dr. Charman announced that the plans of the Committee for preparing a new Fee Schedule were well in hand and a new one should be issued in late 1969 or early 1970. Dr. Charman noted the distinction between a Society Fee Schedule and an M.S.I. Tariff.

AC79—It was brought out that paragraph AR465 was not entirely accurate and that for the purpose of the record, it was best that it be deleted.

AC'68 # 28:

Moved by Dr. A. J. M. Griffiths.

Seconded by Dr. J. A. Myrden.

"THAT Para 465 be deleted from the Report of the Fees Committee" CARRIED.

AC80—Discussion of para AR464 resulted in its amendment, again for the purpose of clarity.

AC'68 # 29:

Moved by Dr. B. L. Reid.

Seconded by Dr. F. A. Dunsworth.

"THAT AR464 be changed to read: "It has been our understanding that M.S.I. will in the near future publish a manual which will include the 1967 Fee Schedule of The Medical Society of Nova Scotia, and it is also our understanding that some negotiated changes in the Preamble will be made, coding will be completely changed and some new items not listed in the 1967 Fee Schedule will be added." CARRIED.

AC81—Resolution AC'68 # 30 followed.

AC'68 # 30:

Moved by Dr. J. H. Charman.

Seconded by Dr. F. J. Barton.

"THAT the Report of the Committee on Fees, as amended, be adopted." CARRIED.

AC82—**Report of Committee for Membership**

Report of Committee for Insurance

Report of Committee for Mental Health

Report of Committee for Rehabilitation

Report of Representative to Medical Advisory Board, Nova Scotia Tuberculosis Assoc.

Report of Representative to Board of Registration, Certificated Nursing Assistants.

Report of Representative to C.M.A. Trusteeship

Report of Medical Advisory Committee on Driver Licensing

Report of Rh Committee

Public Relations Committee Report

Report of Maritime Medical Care

Report of Traffic Accidents Committee

Report of Occupational Medicine

Report of Federal-Provincial Health Grants

Report of Board of Examiners, Social Workers

AC83—The foregoing reports, containing no recommendations were received for information.

AC84—**Report on Section For Pathology: -** (AR p. 72–74) Chairman, Dr. N. A. Kerenyi.

This report was received for information. It was noted that the recommendations dealt with amendment to the Medical Act and were therefore directed to the attention of the Joint Committee for action.

AC85—**Report of Representative to C.M.A. Executive Committee:** – (AR p. 54–68) Chairman Dr. A. J. M. Griffiths.

This report was received for information.

AC86—The 3rd Session of Council concluded at approximately 11:45 a.m.

THIRD SESSION OF ANNUAL MEETING

AM3—The Chairman called the 3rd Session of the Annual Meeting to order. The deliberations of Council were ratified:

AM'68 # 3:

Moved by Dr. F. A. Dunsworth.

Seconded by Dr. H. C. Still.

"THAT this meeting approve the decisions taken by the 3rd Session of the 4th Meeting of Council." CARRIED.

AM4—**New Business:**

Dr. Kinley tabled the following motion:

AM'68 # 4:

Moved by Dr. C. E. Kinley.

Seconded by Dr. R. O. Jones.

"THAT Whereas the members of The Medical Society of Nova Scotia believe that there is no basis in medical science or in any other field for discrimination because of race, religion or place of national origin; and, Whereas physicians of a variety of races, religions and places of national origin are finding their way to Nova Scotia; Therefore, be it resolved that: The By-Laws Committee give consideration to a statement for inclusion in the By-Laws of the Society which would ensure that no candidate is denied membership in the Society on the basis of race, religion, or place of national origin." CARRIED.

AM5—Dr. Stewart expressed concern that the Society might tie itself up by inappropriate amendments to the By-laws, particularly by establishing the quorum for a meeting of Council at 50. He therefore tabled the following:

AM'68 # 5:

Moved by Dr. C. B. Stewart.

Seconded by Dr. F. A. Dunsworth.

"THAT this Society reconsider the decision to increase the quorum from 25 to 50 in Council and the Society." CARRIED.

AM6—On being carried, the following resolution was put forward:

AM'68 # 6:

Moved by Dr. J. F. Filbee.

Seconded by Dr. F. J. Barton.

"THAT the quorum of meetings of Council and the Society remain at 25 (twenty-five) for the time being and that it be referred back to the Committee on By-Laws for further consideration." CARRIED.

AM7—The Annual Meeting concluded with two motions of thanks as follows:

AM'68 # 7:

Moved by Dr. A. J. M. Griffiths.

Seconded by Dr. W. C. Nicholas

"THAT this Annual Meeting express its gratitude to Dr. Beckwith, Mr. Peacocke and the salaried members of the Staff of the Society for their loyal and devoted service during the previous year." CARRIED.

AM'68 # 8:

Moved by Dr. T. W. Gorman.

Seconded by Dr. J. B. Tompkins.

"THAT a hearty vote of thanks be extended to Dr. Sutherland and Dr. Dunsworth for a splendid job under trying circumstances." CARRIED.

AM8—Adjournment occurred at 12:30, Saturday, November 23, 1968.

APPENDIX "A"

AC86—Dr. Sutherland invited Dr. F. A. Dunsworth, President-Elect, to Chair the meeting while he, as Chairman of the Nominating Committee, reported as follows: –

Officers of the Society: -

President – Dr. F. A. Dunsworth
President-Elect – Dr. L. C. Steeves
Past President – Dr. A. L. Sutherland
Chairman, Executive Committee – Dr. C. E. Kinley
Vice-Chairman – Dr. A. N. Lamplugh
Honorary Treasurer – Dr. J. A. Myrden
Honorary Secretary – Dr. W. C. Nicholas

Branch Representatives and alternates to the Executive Committee:

Antigonish-Guysborough	— Dr. G. Silver Alternate Dr. J. A. MacCormick	Halifax (cont'd)	— Dr. D. R. S. Howell Alternate Dr. Michael Roberts
Cape Breton	— Dr. J. B. Tompkins Alternate Dr. Lyle Skinner		— Dr. H. C. Still Alternate Dr. Ian MacPherson
	— Dr. J. A. MacPhail Alternate Dr. C. A. D'Intino	Inverness-Victoria	— Dr. C. S. Chow Alternate Dr. J. C. Aucoin
Colchester-East Hants	— Dr. H. D. Lavers Alternate Dr. M. Bruce	Lunenburg Queens	— Dr. D. A. Campbell Alternate Dr. F. D. MacDonald
Cumberland	— Dr. J. A. McCully Alternate Dr. H. E. Christie	Pictou	— Dr. J. B. MacDonald Alternate Dr. J. H. Fraser
Dartmouth	— Dr. R. A. Wentzell Alternate Dr. F. J. Hanko	Shelburne	— Dr. F. Markus Alternate Dr. M. T. Cooper
Eastern Shore	— Dr. P. B. Jardine Alternate Dr. S. W. Potter	Valley	— Dr. D. J. G. Morris Alternate Dr. C. E. Jebson
Halifax	— Dr. B. J. Steele Alternate Dr. J. Quigley	Western Counties	— Dr. M. W. O'Brien Alternate Dr. G. D. Belliveau

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Nominating Committee (1968-1969) to report to the 116th Annual Meeting, November 17th & 18th, 1969.

Antigonish-Guysborough	— Dr. Henry Bland Alternate Dr. J. A. MacCormick	Halifax	— Dr. B. J. Steele Alternate Dr. D. R. S. Howell
Cape Breton	— Dr. N. F. MacNeill Alternate Dr. Harold Davidson	Inverness-Victoria	— Dr. J. Claude Aucoin Alternate Dr. C. B. MacLean
Colchester-East Hants	— Dr. T. C. C. Sodero Alternate Dr. M. Bruce	Lunenburg-Queens	— Dr. S. B. Bird Alternate Dr. A. J. M. Griffiths
Cumberland	— Dr. D. Davies Alternate Dr. J. P. Donachie	Pictou	— Dr. R. Munro Alternate Dr. R. C. Young
Dartmouth	— Dr. Graham Pace Alternate Dr. F. J. Barton	Shelburne	— Dr. W. H. Jeffrey Alternate Dr. A. S. Robbins
Eastern Shore	— Dr. M. Trivedi Alternate Nil	Valley	— Dr. Earle Hiltz Alternate Nil
		Western N. S.	— Dr. M. O'Brien Alternate Dr. G. D. Belliveau

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THE MEDICAL SOCIETY OF NOVA SCOTIA

Application for Membership

Name.....
Surname Given names

Address.....

Telephone Number..... Date of Birth.....

Medical School..... Date of Graduation.....

Licensure Province..... Date Issued.....

Other Degrees.....

Post Graduate Training.....

.....

Present Type of Practice.....

SECTIONS: Membership in the Society entitles you to make application for membership in the Section(s) of your choice. Please mark Section(s) you may be interested in.

- ☐ Anaesthesia
- ☐ General Practice
- ☐ Internal Medicine
- ☐ Ophthalmology and Otolaryngology
- ☐ Paediatrics
- ☐ Pathology
- ☐ Psychiatry
- ☐ Residents in Training
- ☐ Radiology
- ☐ Salaried Physicians
- ☐ Surgery
- ☐ Urology
- ☐ Obs & Gyn

Are you a Member of a Branch Society?..... Which Branch Society?.....

Names of Two Sponsoring Members of

The Medical Society of Nova Scotia .....

.....

Remittance Enclosed (See below for details of memberships $.....

Date..... Signature.....

MEMBERSHIP* DUES

	C.M.A.	M.S. of N.S.	P.G. Levy	Total
1st Yr. Pr.**	$13.00	$ 20.00	$10.00	$ 43.00
Ordinary	40.00	100.00	10.00	150.00
Post-Grad Training	10.00	20.00	2.50	32.50
Husband & Wife				
1st Yr. Pr.**	21.00	34.00	20.00	75.00
Ordinary	65.00	160.00	20.00	245.00
Post-Grad Training	15.00	30.00	5.00	50.00
P.G. (outside Canada)	27.00	20.00	.....	47.00
Retired	4.00	11.00	.....	15.00
Non-resident (Canada)	.....	15.00	.....	15.00
N. R. (outside Canada)	27.00	15.00	.....	42.00
Senior, Honorary Members	.....	.....	.....	.....

*Membership and fiscal year Oct. 1 - Sept. 30.
**Actual practice in Nova Scotia.