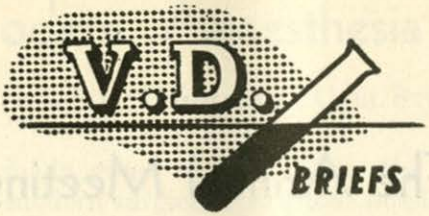

Babies Saved From Syphilis

Syphilis extends to the foetus about the fifth month of pregnancy. Prior to that, spirochaetal invasion of the foetus has not occurred in most cases. If maternal syphilis is discovered before the fifth month—invasion of the foetus can be checked. If treatment is continued till term, the baby has a 95% chance of being normal and non-syphilitic.

"Blood Tests for Every Expectant Mother Before the Fifth Month."

Medical "Certificates" for Prostitutes

From a committee report, House of Delegates, American Medical Association, June 8, 1942:

"It is inconceivable that any reputable physician should so degrade his profession and himself as to issue certificates to prostitutes to the effect that they are free from venereal disease."

Gonnorheal Vaginitis of Immature Girls

"In most instances, vaginitis of immature girls is not due to gonorrheal infection. An accurate diagnosis depends on securing positive cultures from discharge which is best obtained from the neighbourhood of the cervix. A diagnosis which depends on an examination of spreads is not to be relied upon.

Too many other Gram-negative organisms in the vaginae of children resemble gonococci. Ordinarily a gonorrheal infection is limited to the vaginal mucosa. Sulpingitis occurs very rarely.

Girls with gonorrheal infections need be kept from school only while the discharge is profuse. If properly treated, this period should be a matter of only a few days. *The spread of injections on toilet seats is not to be feared.* The danger of institutional contacts has been grossly exaggerated. Ordinary isolation technique in well conducted hospitals is sufficient to prevent the transmission of infection to other patients. More intimate direct contacts in the family or with playmates constitute the most frequent modes of spread of the disease in immature girls."—"Venereal Disease Information, May, 1943."

"Find V.D. Contacts—Report V.D. Cases"

The Annual Meeting

The 92nd Annual Meeting of The Medical Society of Nova Scotia will be held at the Cornwallis Inn, Kentville, on October 10th, 11th and 12th. The executive meeting will be called for the afternoon of October 9th, at 2.30.

In accordance with the wish of many of our members the general meeting will last for two and one-half days instead of the customary one and one-half. The number of scientific papers will remain practically the same as in the past so that there will be ample time for discussion of each paper. The programme has not yet been set up. We are to be honoured by a number of speakers from the Canadian Medical Association and as usual the balance of the programme will be made up of contributions from members of our own Sociezy.

Doctor Léon Gérin-Lajoie, the President of the Canadian Medical Association, and Doctor T. C. Routley, the General Secretary, will be with us and *one afternoon will be given up to the discussion of Health Insurance, so come prepared to discuss this important question.*

The Cornwallis Inn has set aside fifty rooms as accommodation for 100 for the meeting. Members, however, will be asked to double up so make up your parties well in advance. The usual hotel rates will prevail, i.e., six dollars ($6.00) per day per person for room and board. Reservations can be made through the Secretary, or by writing direct to Mr. R. M. Ellis, Manager of the Cornwallis Inn, Kentville.

The usual social functions will be held—the annual dinner will be a mixed one. Everything points to an interesting and enjoyable meeting. Entertainment will be provided to the wives of members so plan now to attend and bring your family with you.

Modern Anaesthesia

SURGEON LIEUTENANT COMMANDER CARL STODDARD

ANAESTHESIA has made great strides during the past twenty years and has made certain modern surgical operations possible by new methods and techniques.

Lahey says "The field of anaesthesia within the last few years exclusive of thoracic surgery has perhaps shown greater progress and development than that of surgery itself." One does not have to go back very far in the history of surgery to find that the anaesthetist had the status of a mere technician who, dependent on the surgeon for a living, did as he was bid. Since the surgeon assumed complete authority in the operating room and was responsible for the patient, he naturally dictated premedication and the type of anaesthesia to be used. The reason for this was that far too little attention was paid to anaesthetic problems and that anaesthetists themselves slipped into the status of technicians and let their medical knowledge be forgotten.

The anaesthetist now is considered a full fledged specialist mainly because he has taken a keener interest in his subject and has kept up to date with modern anaesthetic agents and techniques. The anaesthetist is now considered a valued member of the operating team by surgeons of vision due to his ability to administer new anaesthetic agents.

Open minded surgeons have appreciated the efforts of all who were concerned with bringing anaesthesia to its present high state of development and have themselves aided and encouraged anaesthetists in the use of modern methods.

Modern surgery with all its new and extensive operations often requires special techniques in the administration of the anaesthetic and therefore the anaesthetist must be familiar with all. He must know all operative techniques and have a working knowledge of physiology, pharmacology, anatomy and medical matters which might affect the course of the anaesthetic. It is very important that the anaesthetist should be able to give an intelligent, sound opinion as to the condition of the patient at any time during the operation and advise the surgeon accordingly.

It is his duty to visit the patient pre-operatively, review the history and physical findings, generally assess the risk and to order pre-operative sedation. If this is not possible in certain cases the anaesthetist should gain the above information from the surgeon pre-operatively.

Meeting the patient and giving to him or her a few words of cheer and encouragement will stand the anaesthetist in good stead when they meet again in the operating theatre.

I have been surprised during my experience that the majority of patients often fear the thought of going to sleep more than the operation itself. It is our duty then to minimize this fear as much as possible.

Post-operative visits at least once a day for 48 hours allow the anaesthetist to keep good post-operative records regarding complications. Also he may help in recognizing severe respiratory disorders and institute immediate treatment.

Regarding the risk a proposed operation involves, the anaesthetist may be able to give a more accurate opinion than the medical man who only occasionally enters an operating room. This is often true if he has had several years of sound training and practice and has kept good operative and post-operative records.

Newer advances during the past fifteen years have included cyclopropane, intravenous pentothal sodium and evipal, continuous spinal and caudal anaesthesia, endotracheal anaesthesia and curare.

Continuous spinal anaesthesia by intermittent injection with newer drugs and dilute solutions has practically eliminated all the contraindications of the one shot dose spinal. Endotracheal anaesthesia has made many operations safer particularly those in the thoracic cage. Intravenous anaesthesia has already proven itself in military medicine and holds a high place in the armamentarium of the anaesthetist.

Curare, a drug new in this field, shows great promise, giving excellent muscular relaxation in a short time and allows a much lighter general anaesthesia to be given.

Combined anaesthesia has come to the fore in recent years mainly through the efforts of John Lundy of the Mayo Clinic. Here combinations of two or more milder anaesthetic agents are given to produce the necessary results. For example, a light cyclopropane anaesthesia or pentothal sodium may be combined with a small dose of spinal anaesthesia with excellent results. Similarly, 50% N_2O/O_2 (equal parts of nitrous oxide and oxygen) a very mild anaesthetic may be combined with small doses of intravenous pentothal sodium to get equally good results and much safer than if either agent had been given alone.

During the past five to ten years there has been a great interest in diagnostic and therapeutic nerve blocks and naturally modern anaesthetists have developed the necessary skill to execute these procedures.

For operations on the sympathetic system it is very important beforehand for the surgeon to know if the operation will be successful. The anaesthetist may assist by performing the necessary diagnostic block. This applies to the lumbar and cervical sympathetic areas. Therapeutic blocks for sciatica, bursitis, low back pain, sprains and vascular diseases of the extremities are invaluable and are a great aid to the surgeon and internist as well as the patient.

Before choosing an anaesthetic agent one must review carefully the history and physical findings of the patient, the type of operation to be performed, in order to decide the risks involved. Actually the choice will often depend on the anaesthetist's ability to administer the different agents. For those who are not specialists the anaesthetic agent with which they are most familiar is safest. One must remember that a poorly given cyclopropane anaesthesia is not as good as a well given ether anaesthesia. The ideal anaesthetic is one which has an easy, quick, pleasant induction, permits an adequate supply of oxygen, has a quick recovery with little or no vomiting, and is the least toxic to the great organs of the body, namely the brain, heart, liver, kidneys, and spleen.

Time or space do not permit me to go into detail regarding the physiology and pharmacology of the different anaesthetic agents but I would like to tabulate some of the effects of each agent on the body.

Agent	Brain and Nervous System	Heart	Liver	Kidneys	Lungs	Blood	General
Cyclopropane	.....	Tachycardia and irregularities occasionally. Increase in blood pressure.	....	....	....	....	Quick and pleasant induction. Mild nausea and vomiting.
Ether	.....	.....	Depression of function.	Depression of function. May produce acidosis.	Irritant. Excessive secretions.	Reduction of blood volume.	Nausea, vomiting. Stormy induction at times.
Pentothal Sodium	Hyperactive reflexes occasionally.	Blood flow increased.	....	....	Depressent to respiratory centre.	Blood sugar increased.	Quick, pleasant induction. Nausea and vomiting very rare.
Spinal	Headaches, convul- drug.	Drop in blood anaesthesia.	....	....	....	Blood	Nausea and vomiting
Chloroform	.....	Toxic effect. Circulatory depressent.	Damage (Necrosis)	Damage (Necrosis)	....	....	.....
Ethyl Chloride	.....	Toxic effect. Circulatory depressent.	Damage (Necrosis)	Damage (Necrosis)	....	....	.....
Nitrous Oxide	.....	.....	....	....	....	....	Poor relaxation.
Avertin	.....	Drop in blood pressure.	....	....	....	Respiratory depression.	Recovery often prolonged.
Locals and Nerve Blocks	Convulsions, etc., if sensitive to drug.	.....	....	....	....	....	.....

As can be seen from the chart, it would be most unwise to administer an ether anaesthetic to a diabetic for the fear of causing more acidosis and coma. Pentothal sodium should not be given to a patient who has marked pulmonary or heart disease with failure for fear of depressing the breathing too much. Those patients who are very toxic and probably have liver and kidney damage should not be given a prolonged ether anaesthetic but rather should have cyclopropane, local, continuous spinal, pentothal sodium or combinations of the above. In other words, an anaesthetic agent should be fitted to the patient rather than the patient to the anaesthetic agent.

Premedication is the first step towards a good anaesthetic and care should be exercised in the type of drug and dosage used in each individual case. It is wise to remember that the young, the old, those in shock and those who have spent a long time in bed, require smaller doses of sedative. Patients who are to have nitrous oxide, locals or spinals should have fairly heavy sedation, while those having cyclopropane, ether and pentothal sodium need smaller doses.

The main purpose of these drugs is to put the patient in a pleasant frame of mind, abolish all fear, diminish secretions, thereby causing a better induction and also to cut down on the amount of the agent to be used.

The administration of the anaesthetic calls for a few comments. Anoxia and deep third stage anaesthesia must be avoided in cases of shock as they, themselves, will often cause shock. The patient's condition must be correctly estimated and checked at frequent intervals. The blood pressure, pulse, respirations, sweating, must be checked every five minutes or more according to the severity of the case. In those cases where one has anticipated shock, sweating, a fall in B.P., marked increase in pulse rate will require quick treatment and measures instituted to replace blood volume with plasma, blood, or both, according to whether there has been haemorrhage or not. The anaesthetist must anticipate shock and institute measures to prevent it.

It is well known that multiple fractures of large bones, intrathoracic surgery, prolonged abdominal operations, all produce shock and therefore the anaesthetist can be of great value in replacing blood volume as it is lost. Where there has been marked blood loss, analeptic drugs are of little or no value as they only whip up a tired horse. Blood and oxygen are what they need. Endotracheal anaesthesia is the method of choice in operations about the head and neck, the thorax, and patients in the prone position. This allows a perfect airway both for the suction of accumulated secretions and artificial respiration. Also by this method one may keep a patient in a lighter plane of anaesthesia while still getting adequate relaxation.

After a major operation the patient should be moved to the carriage very carefully as rough handling may cause or increase shock. After very major surgery the patient's bed should be brought to the operating room so that the patient may immediately be placed in the bed and thereby saving extra handling and shock.

The anaesthetist should visit each patient once a day for two days or longer according to whether complications have set in. He should see that the patient is turned from side to side every hour and to take deep breaths and encouraged to cough in order to prevent atelectasis. He can detect atelectasis

if it occurs and institute treatment immediately. This may be in the form of oxygen therapy or the insertion of artificial airways and suction. The anaesthetist then can be of great service to the busy surgeon by taking a special interest in the post-operative cases for many of the complications may have been caused by the anaesthetic.

Before closing I would like to say a few words regarding anaesthesia for general practitioners in the country. Here as a rule anaesthesia is limited to emergency procedures, minor surgery and obstetrics. Chloroform is still the most useful anaesthetic for obstetrics in the country. It, however, should be administered slowly drop by drop on an open mask during pains. Chloroform given in this way is not dangerous if one uses caution. If longer anaesthesia is needed such as in version or in forceps delivery, it would be wiser to switch to ether. An unobstructed airway is essential to good anaesthesia. If the practitioner wishes to incise an abscess, reduce a fracture, pentothal sodium intravenously is an excellent anaesthetic. This is particularly true in office practice. Pentothal sodium has a quick, pleasant induction and recovery is without nausea and vomiting. Ether on the other hand, often has a prolonged, stormy induction in patients without premedication, and nausea and vomiting afterwards. The advantage of Pentothal sodium in office practice is easy to see.

Pentothal sodium is administered by the intermittent method, that is keeping the needle in the vein throughout the operation and injecting the agent when necessary. Usually 3-4 c.c.'s of the 5% solution or 7-8 c.c.'s of the 2½% solution will put the patient to sleep. Additional amounts are given when the respirations become deeper or when the patient moves. Motion of the eyeballs is another sign to give more solution. Sometimes in husky individuals half a gram is necessary in order to put the patient to sleep. Atropine grs. 1/150 should always be given subcutaneously one-half hour pre-operatively or intrvvenously if in a hurry. If the patient has a full stomach, one should use local or nerve block anaesthesia whenever possible. For lacerations and traumatic surgery to the fingers, toes, etc., local anaesthesia is excellent. For surgery of the hand, median and ulnar nerve blocks at the wrist with 10 c.c.'s of 1% novocaine plus an intracutaneous and subcutaneous ring around the wrist will suffice for surgery of the hand. Brachial plexus block will be adequate for surgery of the upper extremity. With experience and a working knowledge of anatomy one may get excellent results.

For children ether anaesthesia is more suitable as they do not like needles and besides ether has a greater margin of safety in the young. They tolerate ether well and recover quickly. Atropine pre-operatively in children is not essential and sometimes may be the cause of respiratory complications such as atelectasis. The reason given for this is that atropine tends to make respiratory secretions very tenacious and sticky and makes it difficult for children to expel. Without atropine there is more secretion of mucus but this is readily raised and can be removed by suction. It is a wise procedure during the induction period with children to put them on their side in a slight Trendelenburg position so that secretions may gravitate up to the pharynx and to one side where they can be readily removed by suction.

The technique of spinal anaesthesia with novocaine is quite easy to learn and may be used in general practice for injuries of the lower extremities or rectal surgery.

Among the advantages in the use of spinal, local, and intravenous anaesthesia is the minimum amount of equipment required, as needles and syringes plus the different drugs are all that is necessary.

Oxygen should be on hand when any general anaesthetic is given for it is a life saver if anything goes wrong. Often one encounters many difficulties during the induction period such as laryngeal spasm with cyanosis and it is here that oxygen is essential to improve the color and thereby prevent anoxia of the brain. A small tank of oxygen complete with a breathing bag and mask is all that is necessary and should be included in any general practitioner's equipment. It is my belief that the general practitioner in the country should have a sound knowledge of anaesthesia as he is usually both anaesthetist and surgeon and must assume responsibility for both. I well know that many use chloroform, ethyl chloride and ether exclusively with good and poor results. It is not beyond their power with their basic knowledge of ether to learn intravenous, local and low spinal anaesthesia. Our medical schools have in the past neglected this important branch of medicine and it is hoped that in the future student internes will be assigned in turn for duty with the department of anaesthesia. It is the duty of the qualified anaesthetists in a teaching hospital to instruct every graduate how to give a satisfactory open ether, intravenous pentothal sodium, local and low spinal anaesthesia. There is a definite trend towards this goal in Canada and the U.S.A. and it is hoped that the medical faculties of the universities will recognize the great need for more teaching in the art and practice of anaesthesia.

Summary

1. Surgeon-anaesthetist relationships have been mentioned.
2. Pre-operative and post-operative care has been discussed.
3. Newer advances in anaesthesia have been mentioned.
4. Choice of anaesthesia has been discussed with emphasis on fitting an anaesthetic agent to the patient rather than fitting the patient to an anaesthetic agent.
5. Important points regarding the administration of the anaesthetic have been reviewed.
6. Some comments regarding anaesthesia for general practitioners in the country have been made and discussed.
7. The need for more training in the art of anaesthesia for medical students has been stressed.

Toxic Psychosis with special reference to Bromide and Atropine

ROBERT O. JONES, M.D.
Associate Professor of Psychiatry
Dalhousie University Medical School

THE type of behavior disturbance called a toxic psychosis is probably the most frequent met in the general practice of medicine. This condition is characterized by a definite mental disorder having as its special features, disorientation (the patient does not know where he is, who the people around him are and loses track of time), a mood of fear (feeling that he is to be killed, tortured, etc.) and hallucinations which back up this mood (hearing voices or seeing visions which tell him he is to be killed, drawn and quartered or some equally pleasant expectation). Other features such as restlessness, self harm, or injury to the environment may be present but the foregoing trends, disorientation, a mood of fear with hallucinations and delusions in keeping with the mood are basic and the other symptoms and actions depend on the patient's reaction to these. This state is generally called a delirium and as such is known to every surgeon, obstetrician and medical man. It is a frequent complication on the wards of a general hospital and makes mockery of any hospitals who claim that they do not treat psychiatric patients. These patients are the most disturbed and the most difficult to deal with of any psychiatric case—they are and must always be the responsibility of the general hospital since they are usually temporary and the patient is frequently too ill for commitment to a provincial hospital. Pitiful is the plight of the recently delivered woman who happens to develop such a condition—every maternity ward in the City is then anxious to do only one thing—get the patient out as soon as possible without any reference to the hospital's first job—the complete care of the patient.

The etiology of these conditions is a change in the cerebral cortex, the result of some toxin in the body, frequently aided by exhaustion and poor nutrition. This change can best be visualized in terms of swelling and oedema —in cases coming to postmortem the cells of the cerebral cortex are found to be oedematous, cloudy swelling is present and the normal cerebral architecture is disturbed. From the clinical angle the important thing about this pathological change is that it is reversible—that is if the toxic agent is removed and the proper treatment instituted the cerebral cells in a relatively short time return to normal with complete recovery of the patient. This is in contradistinction to the so-called organic psychosis where there is permanent destruction of cerebral tissue with consequent fibrosis—the pathological changes are irreversible and the clinical symptoms are more or less permanent for the remainder of the individual's life. Rarely the toxic psychosis may result in permanent brain change if the toxic process goes on long enough—this is perhaps best illustrated by psychosis associated with alcohol where delirium tremens is common with complete recovery but if the process goes on indefinitely sooner or later an organic psychosis supervenes.

The toxins causing this type of psychosis can be roughly grouped as follows:

(a) Exogenic: coming from outside the body and including alcohol, drugs (morphine, cocaine, bromides and atropine and many others), heavy metals (lead, arsenic).

(b) Endogenic: toxins arising inside the body—uremia, diabetes, etc. To this group should be added certain diseases where no direct toxin actually is to blame but there is some disturbance in cerebral metabolism due to deficient or inefficient nutrition. In this group would be classed psychosis with severe anemias, or with vitamin deficiencies. There are some entities intermediate between these two, e.g. in pneumonia there is frequently a large toxic element but also there is interference with proper oxygenation of cerebral tissue. The same thing may be said of congestive heart failure.

One could go on indefinitely citing causes of toxic psychosis—the above gives some of the most common. However, it is important to understand that in any disturbance of human behavior the patient always plays a part as well as the experience he is exposed to. Such is the case with the toxic psychosis. There is no doubt that the cause of such reactions is not entirely a matter of being exposed to certain noxious agents—the personality makeup of the patient—his stability, his worries and fears all play a part in his reaction. For this reason toxic psychosis are more often seen when the patient is frightened or worried about his operation, when he does not know quite what to expect or when he feels he will never be the same person afterwards. Toxic psychosis are found to be much more common after certain operations which have a greater personal significance than others, e.g. operations on the female genitalia or breasts, the eyes, or plastic operations. From the angle of prevention time spent in making sure that a surgical patient really knows what his operation is and really wants to have it done is invaluable and may save much trouble later on.

The clinical picture of a toxic psychosis has already been suggested in the above definition. Suffice it to say that characteristically these patients are frightened restless people, not recognizing their surroundings or people around them, having many frightening beliefs concerning what is to happen and hearing voices and seeing visions which back up these beliefs. Frequently there is gross evidence of severe physical disease as well—a high fever, rapid pulse, skin rashes, neurological changes or any of the other things which may go with the above toxins. It should be pointed out however that the mental changes may be the first to occur—when such a mental picture develops, it is good evidence of some type of toxic change and search should be instituted for the cause. Toxic symptoms are characteristically worse at night—the onset is spotty (that is coming and going) and are generally first reported by the night nurse. For some time a patient may go on disturbing the whole ward by his actions at night and yet obviously be perfectly rational throughout the day, then gradually the picture becomes worse and the whole twenty-four hours of the day are disturbed. If the psychosis is allowed to go on the combined effects of overactivity plus toxicity gradually produces a weakened condition from which death may well result. At the very best the occurrence of such a condition may seriously complicate the course of an otherwise minor operation or normal childbirth.

The handling of a toxic psychosis should be accomplished in a general hospital. The majority of these patients need the combined skills of internist, surgeon, psychiatrist and perhaps several other specialists. They are critically

ill people and death is not an uncommon result. Also in favorable cases the course of the sickness is short and the prognosis good—the patient should not have the stigma of mental hospitalization for this sort of thing, and the need for commitment of the patient admitted for a simple appendectomy may make difficult explaining for the surgeon to do. With one or two quiet rooms and adequate nursing these cases can be adequately handled in the general hospital. It is especially useful if the facilities for hydrotherapy are available as well. The following general principles are useful in the management of a toxic psychosis:

1. The most important thing in the treatment of any kind of psychosis is to keep the patient alive. Apart from death from toxicity and exhaustion the delirious patient is in danger from suicide and from accident. Suicide is not common but the risk is present if the patient has many delusions which frighten him. Interestingly during the past four years in the Victoria General Hospital two suicidal attempts have occurred—one in a medical and one in a gynaecological case complicated by delirium. A greater danger than suicide is that the patient may mistake a window for a door and severely injure himself in his confused state. To safeguard against these things the patient needs continuous observation, preferably by special nurses.

2. Give the patient as much security as you can. The best means of increasing the security of this badly frightened person is by special nursing in a room by himself. The delirious patient soon learns to trust his nurse—something he cannot do if the people around him are changing every five minutes. Both nurse and physician should take time to explain carefully all procedures —can you imagine anything more frightening to the patient who thinks he is to be killed then a man in white over behind a screen with miles of rubber tubing around, rattling glasses and asking for sharper needles. Every procedure should be explained and carried out in full view of the patient. If co-operation cannot be gained, have enough staff to insist and carry through the procedure, but even if you have to use force explain it first.

3. Correct the cause for the toxicity—this may mean stopping a drug, carrying out a surgical procedure, giving a blood transfusion or many other things.

4. Conserve the patient's strength as much as possible. Naturally one thinks here of sedation. Drugs frequently cause toxicity—therefore one should be shy of giving them to the already delirious patient. Sedation by means of hydiotherapy is much better but unfortunately few hospitals have the facilities or trained staff for this. Sedatives then are nearly always needed—unfortunately more frequently for the benefit of hospital administration than for the patient. If they are to be used, certain rules should be followed:

(a) Sedatives should be saved for the night when the patient is apt to be most disturbed. They should then be given in the early evening before the patient is disturbed and in adequate doses for a full night's sleep. It is better to give one big dose than several small ones.

(b) A sedative should be chosen which is quickly eliminated, non cumulative and not apt to cause a delirium itself. The barbiturates and especially the Bromides are not useful. Paraldehyde is probably the sedative of choice since it is quickly eliminated and exceptionally safe. Also it can be given by mouth, by rectum or intravenously. Dosage averages about 8 c.c. by mouth, 24 c.c. by rectum and about 5-10 c.c. intravenously.

5. Record carefully the trend of the delirium as material may be gathered indicating the patient's underlying pathological conflicts which may be very useful in his readjustment.

6. Allow a long period of time for readjustment—tragedies have occurred by allowing patients recovering from a toxic psychosis to take over their normal life too quickly. This has been especially so with toxic psychosis occurring post partem as more than one baby has been killed by the mother in a return of her delirium.

Having discussed the toxic psychosis in general terms, I would like to mention two drugs in common use which not infrequently result in delirium. The first of these is bromine. Bromides are prescribed frequently in the treatment of neurosis—usually there is a better and more efficient treatment but still this habit persists. Of recent years it has been shown that bromides have a great tendency to accumulate in the blood if taken over a period of time. One of the most common results of too much bromide is a toxic psychosis—it is generally appreciated that such a result may occur long before skin rashes, etc., appear. Psychosis from this cause is so frequent that routine blood bromide examinations are carried out by many psychiatric hospitals. Symptoms occur generally with a blood bromide of 150 mgm/100 c.c. of blood. It has been found that some 2-10% of admissions to mental hospitals result from bromide intoxication. There is a special danger of such a result in elderly people or people with renal disease. It is rarely necessary to use bromides, they should not be used with elderly people,—if they are used with others the possibility of intoxication should be remembered and prescriptions should be marked "not to be repeated." If intoxication occurs, the drug should be stopped, fluids should be forced and large quantities of sodium chloride should be given by mouth (15 grs. q. 4. h.)

The following is an illustrative case of bromide delirium: Mrs. H. M. a 42 year old woman was admitted to the private service at the Victoria General Hospital following an attempt to jump out of a second storey window. Her reason for this conduct was that she heard "they were coming to take her" —it was apparent that she was having many auditory hallucinations of a threatening sort. The history was that she had always been a rather tense nervous type of person, and some years before she had been given a liquid prescription (which proved to be Elixir of Five Bromides) had it refilled occasionally and taken it on her own direction. Some five weeks before hospital admission, she had a febrile attack associated with cough diagnosed bronchitis and an increased amount of nerves. She resumed the bromide medication of her own accord. During the next few weeks her chest symptoms improved but she became more jittery, slept poorly, and thus increased the dose of her nerve medicine. Two weeks previous her condition was such that she oozed in bed most of the time but this was punctuated with periods of considerable excitement when she would become frightened and say "they were coming." Her sister came to look after her but in the two weeks she had cared for her, the patient had never recognized her. When seen in consultation she was dull mentally, did not know where she was, did not know who the people around her were and could give no account of her symptoms. She denied hearing voices but on observation she could be seen to start away, and at times to reply to what was obviously an hallucinatory experience. One of these terminated in her attempt to get out of the window. The diagnosis of toxic psychosis

was made and, with the history, the suspicion of bromism was entertained. She was removed to hospital where examination of her blood revealed a blood bromide value of 325 mgs/100 c.c. She was committed to the Nova Scotia Hospital where on the above regime she made a good recovery. She remains the same tense, jittery individual she was previous to her psychosis, and needs adequate psychotherapy in an attempt at a better life adjustment.

The second drug which frequently causes a delirium is atropine. This is of course in common use but evidently there are certain people who are sensitive to it, who will develop delirium with small doses which is quite alarming for a time. During the past year five such cases have been observed on the wards of the Victoria General Hospital. One of these developed an acute delirium following the preoperative administration of 1/100 gr. of Atropine, two developed delirium from Atropine by mouth and two developed toxicity after the use of a haemmorhoid ointment containing Belladonna. (Dr. H. W. Schwartz tells me he has seen several cases of the same thing following the use of atropine as eye drops.) One of the latter cases will be reported.

Mrs. L. W., a 52 year old widow was admitted to the public ward with a diagnosis of poisoning. On admission she was excited, hearing voices, her pupils were largely dilated and her pulse rapid. It seemed obvious that she had a toxic psychosis. Careful physical examination showed nothing more than the above. A careful history revealed that she had evidently been a well adjusted woman carrying on a difficult executive job adequately. Recently there had been considerable emotional stress but she had seemed to handle this well. The past week she had complained of haemmorhoids and had used an ointment containing belladonna liberally. The night of admission she had returned home, applied the ointment and in the course of an hour or so had become excited and confused, her pupils had dilated and she seemed extremely ill. It was necessary to use paraldehyde liberally as a sedative for the twenty-four hours after admission. The following day her confusion cleared, her hallucinations disappeared, her pupils returned to normal and she was discharged a day later. She has been followed in the psychiatric clinic since and has shown no further evidence of instability.

This was the first of the series of five atropine deliriums and the writer remained very skeptical of that etiological explanation till he saw two more cases with the same picture following haemmorhoidal ointments. The second of these cases also developed a delirium a few months later when atropine was prescribed by mouth for gastrointestinal symptoms.

Summary

Toxic psychosis are a common problem in general medical practice. They are severe behavior disturbances characterized by disorientation, delusions, hallucinations and fear. Because of their occurrence in a setting of physical disease, they are frequently seen in the general hospital and can best be treated there. The underlying pathology is of a reversible sort and the patient nearly always makes a complete recovery. Nevertheless there are nearly always some personal psychological factors involved—this should be remembered as they offer an avenue for prevention and are important in the final readjustment of the patient. Especially important in the prevention of

such psychosis is the preoperative explanation of what is to be done, what result is expected and the allaying of any associated fears as far as possibl. Common sources of toxicity are discussed and certain general principles in treatment laid down. In conclusion the frequency of psychosis from two common drugs, bromides and atropine, is pointed out and illustrative cases given. It should be urged that bromides be almost entirely dispensed with in modern medical practice. Atropine on the other hand is very useful but the practitioner should remember that one toxic manifestation is the production of mental symptoms.

On account of the crowding of the trains and busses due to the discharge of many men from overseas the members of our Society are especially requested by Mr. W. C. Oxner, Prices and Supply Representative, to use their own cars in coming to the convention. They are also requested as far as possible to double up so as to save gasoline.

Marihuana Problems*

Reviewed by

M. K. McPhail

SO much has been written about the evils of marihuana smoking and the literature on the subjective effects of the drug is so coloured by the impressions of imaginative writers that it is refreshing to read the above report which leaves speculation behind and treats of factual data. This small book embodies the report of a committee appointed by Mayor LaGuardia to study the problem of marihuana addiction in New York City. The feeling existed that marihuana usage was widespread in New York, especially amongst high school students, and this, coupled with the press reports of the gravity of the situation in New Orleans and other southern centres, led to the above investigation. The committee that made the study was composed of men of widely different trainings—it consisted of two internists, three psychiatrists, two pharmacologists, and one public health expert, and the Commissioners of Correction, of Health, and of Hospitals, and the Director of the Division of Psychiatry of the Department of Hospitals, *ex officio*.

Although marihuana usage is of recent origin in the western world, being introduced near the turn of the century, the addiction itself is one of the oldest known to mankind. The drug is obtained from an oil or resin formed in the flowering tops of the hemp plant, *Cannabis sativa*. Cannabis indica is an older name for the plant and has been, to a certain extent, retained in medicine for the drug itself. In Africa and Asiatic countries the intoxicant is indulged in by some one or two million people and is used under the names of *hashish*, *bhang*, *ganja*, and *dagga*.[1] It may be smoked, taken as a confection, or used as an intoxicating drink. "Marihuana" is the name given the weed in Mexico and Latin-American countries—it is said to be derived from the Portuguese "maraguango" meaning intoxicant. Much has been written on the pleasurable effects of cannabis—the habitué is described as being rapidly transported from a harsh cruel world into one of his own making where he is at ease and happy, surrounded by objects of unspeakable beauty, and all conception of space and time is lost. Mental deterioration has long been ascribed to the prolonged use of cannabis and the impression has grown that crime, especially sex crime, is associated with marihuana smoking, although such an impression, it should be pointed out, is at variance with the careful studies of a number of prominent psychiatrists (see Bromberg 1934, Am. J. Psychiat. 91, 303).

Let us turn to the report itself. The first phase of the enquiry deals with the incidence of marihuana smoking in New York City. Information was collected by six police officers—four men and two women acting as plain clothes investigators—who circulated in districts where marihuana appeared to be used, and found out as much as possible about the number of users, how the drug was obtained and its relationship to crime, sex abberations, etc. It was found that marihuana smoking was most prevalent in Harlem, a district

*"The Marihuana Problem in the City of New York. Sociological, Medical, Psychological and Pharmacological Studies by the Mayor's Committee on Marihuana." The Jaques Cattell Press, Lancaster, Penna., 1944, pp. XII and 220. $2.50.

[1]For the interesting nomenclature associated with the hemp plant and hemp drugs see "Marihuana—America's New Drug Problem" by R. P. Walton. J. B. Lippincott Co., Philadelphia. 1938.

whose population is predominantly Negro and Latin-American. The drug for the most part comes from peddlers and "tea-pads"—these latter being establishments for marihuana smoking. Although no figures are available as to the number of marihuana users in New York City, it is estimated that there are some 500 peddlers and 500 "tea-pads" in Harlem alone.

The majority of marihuana users were found to be young—20 to 30 years old—weak, indolent, shiftless individuals who smoke for the relief of boredom and for the feeling of adequacy which it gives them. The desired stage of stimulation or euphoria is known as "high" but this stage is rarely exceeded and each smoker seems to know instinctively when to stop smoking. Over indulgence or being "too high" leads to panic and the fear of impending death —a picture that has been well described in the early literature. The smoker was usually found to be friendly and sociable, and no relationship between violence, crime or sex misdemeanour was noted. The "tea-pads" were not houses of prostitution. No organized traffic in the drug among New York school children was found. Smoking can be stopped abruptly without the severe mental and physical stress which is so characteristic of addiction to the opium alkaloids.

In the second phase of the work a medical and psychological study of the individual user was made. Seventy-seven individuals, obtained from the prison population of a penitentiary, were examined; over one-half of them were marihuana users, the others of the class from which the marihuana smokers came. They were hospitalized, given medical and nursing care, and the experiments themselves were conducted by two physicians and three psychiatrists. The marihuana used in this study was administered either by mouth in the form of an extract or by smoking cigarettes. The dose required to produce definite systemic effects was found to vary from a minimum of 1 cc. to a maximum of 22 cc. for the extract, and from 1 to 10 cigarettes. The effects of smoking appeared immediately and passed off usually in three to four hours; those from extracts came on more slowly and persisted for a much longer period, in some instances for 24 hours or more.

Generally the action of the drug was to produce relaxation and pleasurable effects although occasionally this was "interrupted or replaced by a state of apprehension." Rarely there were alterations in behaviour and anti-social expressions which could be interpreted as acts of violence, e.g. "opposition and antagonism and eroticism" but in no case was restraint by force needed. As well as the mental effects there were objective changes with tremor, ataxia, and dizziness being the most frequent. There was often hunger and a desire for sweets, a finding which substantiates the observation of many writers describing the effects of cannabis on themselves.

In the total group studied, what is described as "psychotic episodes" occurred in 9 of the subjects. In 6 patients these were of short duration and were characterized by confusion, excitement, laughter and anxiety. They were of the nature of an acute intoxication, not unlike acute alcoholism. The effects passed off in three to ten hours. In the three other cases the precise role played by the marihuana in inducing the psychotic states was not clear —all of the subjects were unstable; the first was found to have a history of epileptic attacks; the second was a heroin addict and the third probably suffered from what is described as "prison psychosis."

A laboratory study made on the effects of marihuana on the functions of the various organs of the body was not very revealing. Apart from a slight increase in pulse rate and blood pressure, and an increase in blood sugar and metabolic rate the findings were negative. There were no alterations in circulation rate, vital capacity, hemoglobin, blood counts, renal and liver function, blood nitrogen, serum calcium and phosphorus, or gastric secretion.

A psychological study concomitant with the general medical one was planned and carried out by competent psychologists. By the use of special tests they determined the effects of marihuana "on psychomotor responses, on intellectual functioning and on emotional reactions and personality structure." It was found that marihuana had an adverse effect on intellect, impaired memory, slowed reaction time, and interfered with the speed and accuracy of motor function. However, the basic personality of the individual was not altered. Like alcohol it lessens inhibitions but does not evoke responses which would be alien to the individual; "it induces a feeling of self-confidence; but this is expressed in thought rather than in performance."

There was no evidence of mental or physical deterioration in individuals who had been smoking for a period of years which could be attributed to marihuana. No tolerance was found to be developed and it is concluded that it is not a drug of addiction. Because of its euphoric effect, its stimulation of appetite and its ability to produce a feeling of self-assurance it was used therapeutically in a limited number of addicts undergoing morphine withdrawal. Although the impression was gained that marihuana was beneficial in these cases no conclusions are drawn as to its therapeutic value. More extensive trials will be needed before such conclusions can be made. But if cannabis should prove to be of value in certain types of psychosis, it will be another example of a drug appearing in the pharmacopoeia, of being rejected as valueless, and later being readmitted.

The last section of the book deals with the pharmacology of marihuana and has been prepared by Dr. Loewe of the Cornell Medical Centre. Knowledge of the chemistry of marihuana has lagged far behind knowledge of the plant and its action in man—a lag due in part to the failure to isolate the active principle and in part to the lack of a biological test which paralleled the effects in man. Two crystalline substances have been isolated from hemp oil—cannabinol and cannabidiol—neither of which has physiological activity. However, a study of the molecular structure of these two agents led to the preparation of a number of tetrahydrocannabinols, products of high marihuana potency and probably the active principles formed in the hemp tree. As yet these have not been obtained in crystalline form, but one synthetic tetrahydrocannabinol, "readily produced, and of constant rotation" was taken as a standard of reference and most of the laboratory studies have been made with it.

Marihuana produces in dogs a typical reaction in which swaying movements and ataxia are marked. A number of methods of biological assay have been proposed for the drug but the ataxia in dogs seems to parallel best the reaction in man and this has been used as the means for evaluating the potency of different hemp fractions and synthetic products. Although much has already been accomplished on the chemistry of the marihuana compounds, many problems remain unsolved. Little is known, for example, of the rela-

tionship between molecular structure and physiological response. When such is known, it may be possible to prepare marihuana derivatives of great therapeutic value. In any case the use of an easily standardized product should aid materially in the therapeutic trials of this drug now under study.

In summary it may be said that Mayor LaGuardia's committee, although bringing little to light that is new about marihuana, at least, has settled a number of disturbing questions. It has found: that marihuana usage is not widespread in school children in New York City; that there is no organized traffic of the drug in the high school students; that the drug *per se* is not a positive factor in inducing crime (it does however lead to a lessening of inhibitions like alcohol); that the drug does not result in addiction in the sense of the opium alkaloids; and finally it recommends that in certain psychoses and as an aid in morphine withdrawal it may be beneficial.

The report is short, informative and interesting, and all who take the trouble to read it will be amply rewarded.

A final word of caution might be in order. The report is limited; it deals with the problem of marihuana in New York City alone and experiments are limited to those conducted on 77 individuals. Yet it serves to show that much of the colourful literature written on marihuana is false. Nevertheless, although marihuana is not a drug which leads to serious addiction as does morphine and related substances, yet it would be a serious error to interpret the report as a statement of the complete innocuousness of the drug. This, I am sure, was not intended. A recent editorial in the *Journal of the American Medical Association* (April 28, 1945) labels the report as thoroughly unscientific, narrow and harmful and advises public officials to "continue to regard marihuana as a menace wherever it is purveyed." This criticism may be needlessly severe but the advice is good. It is well for the physician to know that marihuana addiction is not necessarily a serious condition but at the same time it would be unwise to create the impression that the use of the drug is harmless. Statements found in the early literature of cannabis should be sufficient to dispel such an impression.

Abstracts from Current Literature

LIVER INVOLVEMENT IN MALARIA. Kern, R. A. and Norris, R. F.: U. S. Nav. Med. Bull., 1944, 43:847.

Kern and Norris were impressed with the frequency of involvement of the liver in their studies of 1,153 cases of malaria seen on a hospital ship. Enlargement of the liver was found 59 times in 100 consecutive proved malarial patients. Two-thirds of the patients with falciparum infection had an enlarged liver. This was a somewhat higher incidence than among the vivax cases or among those in whose thick films plasmodia were found, but the species of plasmodium could not be identified. The enlargement of the liver, like that of the spleen, seemed to follow the course of the disease. It was not palpable at the onset of the disease but enlarged during the first few days of fever and tended to remain so during the duration of symptoms. It grew smaller as the fever subsided under treatment. The consistency of the enlarged liver varied considerably. Liver tenderness was present on palpation in 8 of the 59 patients. The liver involvement is attended by impaired hepatic function, as shown by increased van den Bergh readings of blood bilirubin, but rarely reaching the stage of obvious jaundice and by sulfobromophthalein retention. Impairment of function, like enlargement of that organ, varies with the activity of the disease. The liver condition may give rise to anorexia, occasionally to nausea and vomiting, and perhaps to other vague symptoms that might be called "cachectic." The enlarged liver is at times tender to palpation and in rare instances is painful, suggesting the possibility of liver abscess. The presence of liver involvement is not an evidence of chronicity. The nature of the liver change is uncertain; at most it may be a swelling of the parenchymal cells and attendant compression of the sinusoids, plus the finding of malarial pigment in the Kupffer cells. The authors recommend the use of a high carbohydrate, high protein, low fat diet in malaria to spare the liver from further damage.

RELAPSING MALARIA. Metcalf, R. J. and Ungar, J.: U. S. Nav. Med. Bull., 1944, 43: 859.

Metcalf and Ungar analyze observations on a series of 250 cases of malaria, all except 2 of which were in men who had been evacuated to the United States following the initial engagement in the Solomon Islands. On return to the continental limits all patients were admitted to a naval hospital where malarial smears were made. In the absence of clinical malaria and with negative smears many patients after a relatively short time were granted thirty to forty days' sick leave and permitted to go to their homes. Many became acutely ill while on leave and were forced to seek treatment at or near their homes. These relapses did not seem to respect any particular climate or altitude. The cases described here are chronic relapses, benign tertian in type. A low parasitemia was capable of producing a severe rigor. The figure has been as low as 9 parasites per cubic millimeter of blood. This is in contrast to the findings in natives inhabiting malarious areas, who frequently are shown to harbour a tremendous number of parasites with no clinical manifestations. Even in

the American forces at this comparatively early date many cases with parasitemias but no clinical disease have been reported. These cases are added evidence that we do not have as yet any drug or combination of drugs adequate for coping with the malaria problem. It is fortunate in view of the quinine shortage that atabrine is available. This drug has a meritorious record in malignant tertian malaria. Its efficacy in the benign tertian type is considerably less. Atabrine failure is not due to insufficient dosage, since large doses were given. Quinine in large doses has been much more effective in these cases. The ideal drug for eradicating plasmodia, particularly the latent form recently termed the cryptozoite, may well be found to be a colloidal plasmodicide having a special affinity for the reticuloendothelial system. Such a compound has been evolved by combining high molecular pectin solutions with various soluble plasmodicides. Toxicity studies are promising, but as yet no opportunity for using the substance in experimental malaria has been afforded.

NOTES ON 250 CASES OF SUBACUTE BACTERIAL (STREPTOCOCCAL) ENDOCARDITIS STUDIED AND TREATED BETWEEN 1927 AND 1939. Kelson, Saul R. and White, Paul D.: Annals of Int. Med , 1945, 22: 40.

A series of 250 well-substantiated cases of subacute bacterial (streptococcal) endocarditis studied in five Boston hospitals and in private practice from January, 1927 to March, 1939, has been analyzed for three purposes: (a) to evaluate more completely the clinical picture; (b) to establish a baseline of prognosis, especially as a means by which the effects of therapy can be measured; and (c) to determine the results of treatment prior to the intensive use of the newer chemotherapeutic drugs and the anticoagulants. All the patients had cultures positive for nonhemolytic streptococci of the alpha (viridans) or, rarely, the gamma (anhemolytic) variety. In these clinically definite cases, with two or more positive blood cultures as a rule, the ratio of positive cultures to all cultures taken was 74.4 per cent, being 66.8 per cent from 1927 through 1932 and 78.8 per cent from 1933 through 1938.

The male sex was preponderant in the ratio of about 2 to 1 (161 to 89, or 64.4 per cent to 35.6 per cent).

The average age of the entire group was 31.8 years with a range from 2½ to 78. The majority of the cases were in the third and fourth decades, the former predominating with 80 patients. The average age of females (25.7 years) was distinctly less than that of males (35.2 years).

The great majority of the 250 cases had rheumatic heart disease (224 or 89.6 per cent—though the rare possibility of a previously unimpaired heart could not be completely excluded in some of those who were not autopsied; in two of the 57 autopsied cases, hearts believed clinically to show rheumatic (mitral) disease presented no apparent pre-existing lesions). Mitral valve involvement alone (usually regurgitation) was diagnosed in 96 (42.9 per cent of the rheumatic group). Aortic valve involvement was diagnosed in 130 cases (58.0 per cent of the rheumatic group), divided into two cases of stenosis, 106 of regurgitation and 22 of stenosis and regurgitation. Of these 106 cases, 74 also had mitral diastolic murmurs, which may or may not have denoted mitral stenosis—or even prior rheumatic mitral disease; the apical systolic

murmur present in most of the group was likewise not necessarily diagnostic of organic mitral disease, and for this reason it is not possible to break down the group into uncomplicated aortic and combined aortic and mitral lesions. Congenital defects were diagnosed in 13 patients or 5.2 per cent of the 250 cases, including five instances of patency of the ductus arteriosus and five cases of ventricular septal defect.

The most common predisposing cause of the illness in the cases studied, if we exclude the indefinite condition called grippe—which may have been the early stage of the disease itself—was some dental procedure, especially extraction. Exact figures are not possible in this series, for often no statement about previous dental treatment was included in the history, but it is estimated that almost one in four cases of subacute bacterial endocarditis gives such a history if inquiry is made. It has been stressed that individuals susceptible to this disease should be particularly attentive to the care of their teeth and should avoid harsh dentistry and extractions not clearly indicated.

The incidence of salient clinical findings in this group of 250 cases was as follows: heart murmurs in 99.2 per cent, petechial hemorrhages in 86.5 per cent, palpable spleen in 59.0 per cent, hematuria in 49.0 per cent, clubbed fingers in 46.7 per cent and chills in 40.5 per cent. It was not the rule to find all these conditions present in the same patient; for example, splenomegaly, clubbing and petechiae were present together only in 13.1 per cent, and none of these three significant findings in as many as 6.1 per cent.

The differential diagnosis of subacute bacterial (streptococcal) endocarditis includes a consideration of many different diseases. Those more commonly considered in the present series of cases were "grippe," rheumatic fever, renal calculus, meningitis, pleurisy, tuberculosis, pneumonia, subarachnoid and cerebral hemorrhage, brain tumor and abscess, central nervous system and latent syphilis, and angina pectoris. Among those less commonly considered, there were acute appendicitis, neurosis, undulant, typhoid, and typhus fevers, perinephric and subphrenic abscess, and portal thrombophlebitis. The commoner manifestations of the disease, namely fever, local symptoms from embolism to the brain or spleen or other viscera, and renal involvement, were the reason for this wide diversity of suspected diseases. It has been emphasized that fever and malaise in a patient with a heart murmur may mean subacute bacterial endocarditis, and, unless another cause is clearly recognized, it is important to confirm or exclude the diagnosis by repeated blood cultures.

Analysis of this series revealed instances of the concurrence of rheumatic fever and subacute bacterial endocarditis. It appears that the latter disease may serve as a factor to activate rheumatic fever in susceptible individuals, and also that bacterial endocarditis may arise during the course of rheumatic infection.

Chronic rheumatic mitral stenosis was too often diagnosed in the presence of a mitral diastolic murmur, which in a number of cases that came to autopsy was apparently the result of dilatation of the left ventricle or of vegetations on the mitral valve; only three of 19 cases, 10 with and 9 without aortic regurgitation, diagnosed as having mitral stenosis during life, showed such stenosis at autopsy.

Of the 250 cases of subacute bacterial (streptococcal) endocarditis studied, 246 were adequately followed up and all died of the disease except one who succumbed to rheumatic myocarditis after a period of one year of freedom from evidence of bacterial endocarditis.

The duration of the disease to death averaged 5.9 months, with longer duration for females (7.0 months) than for males (5.3 months). The numerically largest group survived three to four months, the second largest four to five months. The longest survivor lived 19 months. An appreciable number —18—lived more than a year.

No therapy was curative. Occasionally there seemed to be a temporary effect on the disease from some of the measures tried, but it must be remembered that the disease itself has a markedly variable course. Therapy included whole blood transfusions in 45 patients, and transfusions from immunized donors in three cases and from a "recovered" patient in one, bacteriophage in eight, autogenous vaccine in nine cases, stock vaccines in two antistreptococcal serum of various kinds in seven and inoculation with living organisms from the patient's blood in five. Injections intramuscularly of sterile milk and of turpentine were administered in two cases each, and hyperthermia, radiotherapy, and ultraviolet radiation in a few scattered instances. Various chemicals were used, including sodium cacodylate in four, neoarsphenamine in two, metaphen in two, acriflavine in two, gentian violet in three. mercurochrome in three, and in the early days of sulfonamide therapy, prontosil in five, sulfanilamide in 24, and sulfapyridine in four. Use of this last group of drugs was followed in some cases by reduced fever and negative blood cultures neither of which persisted.

NOTES ON THE TREATMENT OF SUBACUTE BACTERIAL ENDOCARDITIS ENCOUNTERED IN 88 CASES AT THE MASSACHUSETTS GENERAL HOSPITAL DURING THE SIX YEAR PERIOD 1939 TO 1944. White, Paul D., Mathews, Marion W. and Evans, Elwyn: Ann. of Int. Med., 1944, 22: 61.

An analysis has been presented of a series of 88 clearcut and four probable cases of subacute bacterial endocarditis treated at the Massachusetts General Hospital from January 1939 to September 1944 inclusive.

Five (6.5 per cent) of 77 sulfonamide treated patients who were followed up recovered and quite possibly a sixth case, and if two other patients who had valvular lesions, fever, embolic phenomena, and at least one positive culture are included, six (7.8 per cent) or seven (8.9 per cent) of 79 recovered

The opinion that the milder the infection and the earlier the treatment is instituted, the better the prognosis, is only partially confirmed.

The transient antipyretic effect of sulfonamides, especially sulfapyridine, was noted. Fifty-two (68.8 per cent) of the 77 sulfonamide treated cases showed a complete loss of fever within one to three days after treatment was instituted, the response lasting from two to 12 days. Sulfapyridine appeared to have a greater antipyretic effect than other sulfonamides.

Seventeen cases of the sulfonamide series received heparin in the course of treatment; 11 for five days or less, one for seven days, and five for 10 to

23 days. Three of the five recovered cases had received heparin and the other two had not. Five more recent cases were given dicoumarin without effect.

Since January, 1944, nine cases of subacute bacterial endocarditis have been treated with large doses of penicillin. The results to date are as follows: (a) Two of the 9 cases have died, one of cerebral embolism during the course of treatment and the second of rheumatic fever eight months after the completion of therapy, apparently bacterio-logically "cured." (b) One case seems clinically free from infection but has severe congestive failure. (c) One case who had to return for a second course of therapy has now been having low grade fever for two days so that his present status is uncertain. He may have active rheumatic fever. (d) One case was well for one month after the completion of therapy but returned on December 12 because of low grade evening rise of temperature. He showed a recurrence of subacute bacterial endocarditis, but at present is again controlled by penicillin and sulfadiazine in combination. (e) Four cases are apparently well. Three are clinical and bacteriological "cures" seven weeks, five months and eight months after the completion of therapy and the fourth is well two months after a three weeks' course of penicillin given for recurrence of the infection. (f) Thus six of these nine cases (67%) have shown a definite control (perhaps a cure) of their subacute bacterial endocarditis by "massive" doses of penicillin; two of these six cases, however developed other serious complications, namely rheumatic fever and congestive heart failure. (g) A follow-up note of this series will be presented at the end of another year, at which time a more accurate appraisal can be given.

Important complications of subacute bacterial endocarditis that tend to be too little emphasized are cerebral embolism, acute rheumatic infection and congestive failure alone or in combination. At the present time these three conditions, as noted above, are on occasion serious drawbacks to complete recovery, even in the very cases that seem to be reacting so well to the massive penicillin therapy.

E. David Sherman, M.D.
Abstract Editor

The main ball-room of the Cornwallis Inn at Kentville, N. S., has been set aside for exhibits at the annual meeting of The Medical Society of Nova Scotia from October 10th to 12th. Booths will measure 8 x 8 ft., and the charge will be $50.00 each. For further information apply to Doctor H. G. Grant, Secretary, or Mr. D. J. Gallagher, Prince's Lodge, Halifax County, N. S.

Canadian Physicians' Camera Salon

"One of the outstanding exhibits of Canadian amateur photography that I have seen."

These are the words of Mr. Raymond Caron, A.R.P.S.,A.P.S.A., one of the judges at the recent Canadian Physicians' Camera Salon held at the Eaton Art Galleries in conjunction with the Canadian Medical Convention.

This exhibit, the first of what is hoped will become an annual show, was held under the auspices of the Montreal Camera Club and was sponsored by Frank W. Horner Limited.

The exhibition was formally opened at 10 a.m., June 11th, by Dr. Fred J. Tees, P.S.A. Judges were Dr. Tees, Mr. Caron and Mr. F. T. Clayton.

Organized to give Canadian Physicians an opportunity to display their photographic talents—the exhibition was divided into two classes—one for physicians—the other for laymen. Each class was divided into two groups, Prints and Kodachrome—feature being that the exhibit was the second time that Kodachrome has been exhibited in Canada.

Winners in each group are as follows:

For Prints in the Physicians' Class—First, Dr. G. B. White, Port Colborne, Ont., "A Gallant Company;" Second, Dr. H. Campbell Brown, Vernon, B. C., "China Missionary;" Third, Dr. Claude Lamarche, St. Therese, P. Q., "La Cabane;" Honourable Mentions: Dr. W. K. Blair, Oshawa, Ont., "Snow and Mist;" Dr. L. J. Notkin, Montreal, P. Q., "Within Thy Portals;" Dr. G. B. White, Port Colborne, Ont., "Decorations by King Winter."

For Prints in the Laymen's Class—First, Dr. L. G. Saunders, Saskatoon, Sask., "White Winter;" Second, Hugh W. Frith, Vancouver, B. C., "Apache;" Third, J. Fraser Byrne, Toronto, Ont., "Putting Out;" Honourable Mentions: F. C. Houghton, Montreal, P. Q., "Dahlias;" W. D. Jewette, Woodlands, P. Q., "Youth Steps Out;" Dr. L. G. Saunders, Saskatoon, Sask., "Sleepy Little Spruce."

Of special interest was the colour photographic section, the second time in Canada that colour slides have been shown.

Colour Transparencies—in the Physicians' Class—First Prize, Dr. Harvey Agnew, Toronto, Ont., "Peggy's Cove, N. S.;" Second Prize, Dr. R. Coyle, Windsor, Ont., "The Bow River Valley;" Third Prize, Dr. E. J. Trow, Toronto, Ont., "Clear and Cold."

Colour Transparencies—in the Laymen's Class—First Prize, Charles Schroeter, Vancouver, B. C., "Gilded Splendour;" Second Prize, W. B. Piers, Haney, B. C., "Autumn;" Third Prize, Marcel L. Cailloux, Montreal, P. Q., "Parure Lacustre."

Large crowds attended the exhibition daily and all expressed the hope that this would be just the beginning of such amateur photographic exhibitions.

Personal Interest Notes

Colonel Thomas A. Lebbetter has recently been demobilized from the R.C.A.M.C. and has proceeded to Winnipeg, where he is now located on the staff of the Winnipeg Clinic. Colonel Lebbetter was one of the leading internists in this Province and also a past President of The Medical Society of Nova Scotia. His many friends throughout the Province while regretting his departure from his native Province wish him every success in his new home.

The marriage took place at St. Paul's Church, Glace Bay, on July 2nd of Miss Helen Jean Macdonald, elder daughter of Mrs. Alex. Macdonald and the late Mr. Macdonald, and Doctor William Inglis Morse, son of Mrs. Ewart G. Morse, Paradise, Annapolis County. She was attended by Miss Susan Morse, sister of the groom, and her sister, Miss Mary Macdonald. Doctor Austin M. Creighton was best man. Ushers were James Moir, brother-in-law of the groom and Doctor Gordon J. Kinley and Doctor Kenneth J. C. MacKinnon. The bride is a graduate of Dalhousie University, and the groom graduated from Dalhousie Medical School in May of this year, and is at present interning at the Victoria General Hospital, Halifax.

Nova Scotians Pass Medical Council Tests

Results of examinations recently held by the Medical Council of Canada at Halifax, Montreal and London, Ontario, were announced recently by Dr. J. F. Argue, Registrar of the Council. There were 148 successful candidates, nine of them women. Successful candidates included: At Halifax—Saul Green, G. R. Hennigar, G. J. Kinley, M. S. MacDonald, W. R. Morrison and D. F. Smith, Halifax; F. L. Akin, Windsor; A. M. Creighton, Tatamagouche; C. A. D'Intino, Sydney; C. E. Doyle, R. G. Macdonald and R. H. Fitch, Moncton; C. F. Keays, Newcastle; C. M. Kincaide, R. A. Morrow F. K. Stuart and V. M. Zed, Saint John; H. A. Locke, Liverpool; Maurice Hubar, Winnipeg; J. A. MacDonald, New Waterford; C. N. MacIntosh, Dartmouth; K. J. C. MacKinnon, Antigonish; N. J. MacLean, Port Hawkesbury; J. O. McNeil, Glace Bay; W. D. Miller, Sussex; Harry Oxorn, Montreal; D. M. Muir, Shelburne; W. J. O'Donnell, Bathurst; H. R. Roby, Truro; G. B. Shaw, Bridgewater; A. A. Wilkinson, Blackhead, Newfoundland; M. W. Dobson, Ninga, Manitoba; G. B. Rosenfeld, Brooklyn, N. Y.

Dr. and Mrs. Ray MacLean of Halifax spent two weeks holiday during June in the Laurentians and Montreal.

Doctor E. I. Glenister of Dartmouth has returned from a post-graduate course in ophthalmology at Toronto.

Lieutenant Colonel B. F. Miller, R.C.A.M.C., who returned to Halifax early in July, spent his first summer vacation in four years with his family in the Margarees. Colonel Miller has just returned from spending five months in the Pacific war theatre, and previously had been overseas for three years.

Tells Story of Hospital Unit

During its career overseas, No. 7 Canadian General Hospital, a Nova Scotia unit, had under its care all tuberculosis patients in the Canadian Army, tended air raid victims, Italian prisoners of war, members of the famous 51st Scottish Division, stricken with malaria, and doctored the first men to be repatriated from Germany in December, 1943. Those were the highlights of the hospital unit's war record as related by Lt.-Col. T. M. Sieniewicz in an address delivered before the Gyro Club at its weekly meeting in the Lord Nelson Hotel, Halifax, on July 18th. The speaker traced the Nova Scotia unit's history from its mobilization in June, 1940, until he left it at Dieppe, in October of last year. Formed at Aldershot in June, 1940, the hospital moved overseas in November, 1941, being convoyed by a "huge American flotilla; although America was not then in the war." First stationed near Aldershot, south of London, the unit soon moved to a hospital outside of Birmingham. For a year and a half the unit's patients consisted mainly of Italian prisoners, air raid victims, and British Army personnel.

In 1943 the Nova Scotia hospital "got a break" and was posted to a brand new hospital built by the Canadian Red Cross on the estate of Lord and Lady Astor, at Taplow, in Buckinghamshire. This new building, housing a 500-bed hospital, "was one of the finest in England."—(Halifax Chronicle, July 19).

The BULLETIN welcomes home from overseas the following Nova Scotian doctors, Lieutenant Colonel G. Ronald Forbes of Kentville, Major George H. Murphy, Captain Ian S. Robb and Captain Ian M. MacLeod of Halifax, Captain Robert W. M. Bethune of New Glasgow, Major John F. Nicholson of Sherbrooke, Major G. W. A. Keddy of Windsor and Captain S. G. MacKenzie of Truro; also Doctor K. Seaman, R.C.A.F., of Liverpool. A welcome is also extended to Major J. E. Andrew of Charlottetown, P.E.I., who graduated from Dalhousie Medical School in 1934.

Among the many Nova Scotians to receive honours, of the Canadian Army overseas, were Major W. S. Gilchrist and Lieutenant Colonel E. F. Ross; the former being made a Member of the Order of the British Empire, and the latter being appointed Officer of the Order of the British Empire.

Captain George Edward Maddison, R.C.A.M.C., has been appointed to the rank of Acting Major.

Eighteenth Anniversary Issue of the Hebrew Medical Journal

VOLUME I, 1945, eighteenth anniversary issue of the *Harofe Haivri* (*The Hebrew Medical Journal*), edited by Moses Einhorn, M.D., has just made its appearance. This special issue is dedicated to the late Henrietta Szold, distinguished humanist and Zionist, who harnessed American Jewish womanhood in a great organization, Hadassah, which is responsible for the vast network of medical and sanitary installations in Palestine, making it the outstanding health centre of the whole of the Middle East.

Mrs. Rose G. Jacobs, an intimate friend and co-worker, who was president of Hadassah for five years, presents a very interesting article entitled "Henrietta Szold's Contribution to the Health of the Body and Soul of Palestine;" Mrs. Tamar De Sola Pool, also former president of Hadassah for four years gives a detailed account of the life and work of Miss Szold.

It was in June, 1918, that Hadassah sent its initial medical unit to Palestine, which brought the first small measure of relief to that country's then war-torn and pestilence-ridden population. During the Second World War Hadassah was recognized and accepted as the driving force which has made, and will help keep, Palestine an oasis of health in the subtropical Near and Middle East areas.

Since 1939 Hadassah has cooperated to the maximum with the Medical Military Forces stationed in Palestine and Near East. Special courses and clinical conferences on tropical and sub-tropical diseases, war surgery, typhus fever, malnutrition, etc., have been made available at the Rothschild-Hadassah-University Hospital. In addition, Hadassah's Malaria Control Service has rendered Palestine the only country in this part of the world in which this infectious disease is of minor significance as a factor in troop morbidity.

Dr. S. R. Kagan contributes an article of particular interest on the contribution of the pioneer physicians to the growth and development of the Zionist movement throughout the world. Since the Middle Ages the Jewish physician has exerted great influence on the communal life of Israel. They were not only the healers of the body and mind, but also leaders, statesmen and diplomats who fought for the rights and freedom of their brethren.

There is also a detailed English section containing summaries and translations of all the articles for those readers who do not understand Hebrew.

For further information, you may communicate with the editorial office of *The Hebrew Medical Journal*, 983 Park Avenue, New York 28, New York.

Urethritis in the Male

Urethritis in the male refers to a clinical diagnosis based on history and physical findings of an urethral discharge.

The results of laboratory procedures will differentiate the cases into gonorrhoea and non-specific (non-gonococcal) urethritis.

Patients on whom the diagnosis of non-specific urethritis is made include two groups.

(a) Those cases of gonorrhoeal urethritis which are misdiagnosed as non-specific urethritis because of inadequate laboratory examination or because of too few gonococci being present to be readily demonstrated, and

(b) Those cases of urethral discharge not caused by gonococci.

MANAGEMENT OF EARLY SYPHILIS

Important Points

1. Laboratory proof of diagnosis.
2. Complete history and physical examination.
3. Accurately written record of the case.
4. Adequacy and regularity of treatment.
5. Blood test every 6 months during the first two years, and every year during the next three years.
6. Examination of cerebrospinal fluid at the completion of treatment.
7. Reporting of the case and investigation of contacts.

TRIWEEKLY MAPHARSEN

Eagle has devised various schedules of treatment for early acquired syphilis where mapharsen 0.06 is injected *three times a week* for a period of 10 to 12 weeks. When mapharsen alone is given, the results are uniformly poor. When bismuth injections are given in addition to mapharsen, the results are satisfactory.

Obituary

The death occured at Glace Bay on June 11, of Senator John Alexander Macdonald, M.D., of St. Peter's, at the age of 63, after a short illness. Dr. Macdonald was born at Harbour Boucher, N. S., in 1882, a son of the late Mr. and Mrs. Hugh Macdonald. He studied in the village school, later attended St. Francis Xavier University where he received his B.A. Degree, and then pursued medical studies at Dalhousie University graduating in 1909. His first practice was at River Hebert, where he was associated with the late Doctor Rockwell. Later he went to Glace Bay where he remained until March, 1911, when he opened an office at St. Peter's and resided there since that time. Doctor Macdonald entered politics in 1916 when he was chosen Conservative candidate for Richmond County in the Nova Scotian election of that year and was elected to the Legislature. He was re-elected in 1920 and resigned in 1925 to accept the nomination for the riding in the Dominion election. He represented Richmond County at Ottawa from 1925 to 1930. He was re-elected but resigned his seat in favour of the late Hon. E. N. Rhodes. He was appointed to the Senate in February, 1932.

Doctor Macdonald is survived by his widow, the former Miss Lola Maxwell, River John, his daughter Mrs. Hugh O'Hearn (Bernice) Niagara Falls, N. Y., and two grandchildren. His brother Rod and his son Hugh Maxwell, predeceased him. The funeral was held on June 12th, with burial at Harbour Boucher.

The BULLETIN extends sympathy to Doctor L.B.W. Braine of Annapolis Royal on the death of his sister, Marion B. Braine which occurred at Halifax on July 16th, and to Flight Lieutenant Blois C. and Mrs. LePage on the death of their only daughter, Janet Elizabeth LePage, age 21 months, at Halifax on June 26th.

Correspondence

The following letter is published as a correction to certain mistakes made in the article—"Medical Service Plan"—published in the June Bulletin.

July 19, 1945

Hollenberg Clinic
701 Boyd Building
Winnipeg, Manitoba

Miss Ruth C. Wilson
Executive Director
Maritime Hospital Service Association
Moncton, N. B.

Dear Miss Wilson:

I received a reprint of your paper in the NOVA SCOTIA MEDICAL BULLETIN of June, 1945, and I notice that your rates for Manitoba are wrong. The family rate per month in Plan B is $3.50 instead of $2.50 as in your paper. I would wish you to make this correction as soon as possible in your BULLETIN.

There is one other fact that I wish you would publicize at the same time, and that is that the Manitoba Hospital Service Association is charging us 19% for operating expenses. I would advise no Medical Association to pay more than 12% and that should be made by contract before the Medical and Hospital Associations form a partnership.

Yours truly

(Sgd.) A. Hollenberg, M.D.