The Centennial Meeting and Dalhousie Refresher Course

SCIENTIFIC PROGRAMME

THIS year, the 27th Annual Dalhousie Refresher Course Committee was given the opportunity to share with The Medical Society in its Centennial Celebrations by assuming responsibility for the scientific programme. In undertaking this we accepted a challenge in view of the very high standard set in past Refresher Courses. The time available for scientific presentations was restricted since time allowance had to be made for business meetings, a special convocation and the even more alarming possibility that the high order of social activities would of necessity curtail the attendance of our scientific meetings. We are happy to be able to state that these fears were unfounded and that the combined scientific programme and the Centennial Celebrations resulted in an unprecedented number of practitioners from the four Atlantic Provinces attending. Furthermore, the excellent attendance at the scientific sessions attested to the high quality of the programme and the earnestness of the practitioners to avail themselves of the presentations.

The John Stewart Memorial Lecture was given by Dr. Wilder G. Penfield, O.M., C.M.G., and his subject was "Science and Surgery." It was most fortunate that for this Centennial year we were able to have such a distinguished neurosurgeon of international fame deliver this lecture. We were also favoured by a clinical presentation the following morning. The acclamation of the large audience was witness to the rare treat we enjoyed at this John Stewart Memorial Lecture and the well chosen words of Dr. Arthur E. Blackett of New Glasgow in proposing the vote of thanks expressed the sentiments that all of us were pleased to see conveyed to Dr. Penfield.

Professor C. F. W. Illingworth, Regius Professor of Surgery at Glasgow University accepted our invitation to be Guest Surgeon for this year. He visited with us for the whole week and gave of his experience unstintingly. The personal contacts that so many doctors had with Professor Illingworth during his stay materially enhanced their appreciation of the week.

In Medicine we had Dr. Chester S. Keefer, Professor of Medicine, Boston University, School of Medicine as our Guest Physician. As a lecturer and clinician he is outstanding and we feel indeed fortunate that he could give of his time to assist us this year.

Seldom have we had such good fortune in our presentation of the subspecialties. Dr. Malamud, Professor of Psychiatry, Boston University School of Medicine and Dr. Tremble, Otolaryngologist of Montreal, gave outstanding presentations that had wide interest to practitioners.

Dr. Willard O. Thompson, Clinical Professor of Medicine at Illinois, a former Maritimer and Arts Graduate of Dalhousie made substantial contribution to the medical programme. The Executive of the Canadian Medical Association held its semi-annual meeting in Halifax during our Centennial Week, and to Dr. C. W. Burns, of Winnipeg, and President of the C.M.A., Dr. E. S. Mills and Dr. W. DeM. Scriver of Montreal, we owe a debt of gratitude for their contributions to our course.

A panel on "Present Status of Health Insurance in Canada" was a timely and informative presentation under the Chairmanship of Dr. Chester Stewart. We were able to call on the services of Dr. A. D. Kelly, Deputy General Secretary of the C.M.A. and Dr. G. E. Wride, Associate Director of Health Insurance Studies, Department of National Health and Welfare, to speak in this discussion along with Dr. Arthur Titus, as representative of practitioners of Nova Scotia.

As a result of the number and eminence of our guests a challenge was presented to the Dalhousie Faculty Members to keep up the quality of our scientific programme. The particular interests of our guests limited their selection, but it was whole-heartedly conceded that their papers and clinics were of an high order. There was other excellent material available which time did not allow us to present and we look forward to the opportunity of presenting such at next year's Refresher Course.

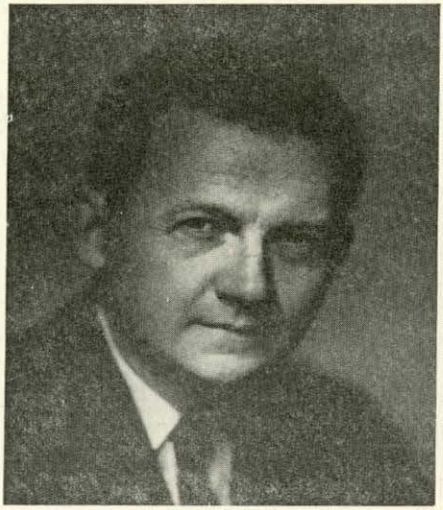
The Committee is happy to say that it has had the most loyal and understanding support of the Faculty of Medicine at Dalhousie whose members were willing to present their own material if requested, or equally willing to postpone their presentations for another year if it was in the interest of making our scientific programme a well balanced presentation.

The success of this year's Refresher Course has placed a heavy responsibility on the Committee in its efforts to maintain the standard of presentation. However, preparations are already being made and we can assure the profession that it will be an outstanding programme and they should again plan to make the necessary effort to attend the 28th Annual Dalhousie Refresher Course in October 1954.

The enthusiasm and the size of our audience this year has clearly further demonstrated the acceptance of the principle that all of us in Medicine are continuing learning and that "Refresher Courses" and other informative programmes at home by visitors, or local physicians and surgeons is a part of our life if we are to render the high quality of Medicine and Surgery to the people of these Atlantic Provinces. It is gratifying to know that Dalhousie University is not content to limit its post-graduate programme to the annual Refresher Course alone, but actively supports many other meetings throughout the Atlantic Provinces. This surely indicates the oneness in outlook of Dalhousie University in being the medical centre for the Atlantic Provinces in its training of the undergraduate student and then assisting in the continued education throughout his active years of medical practice.

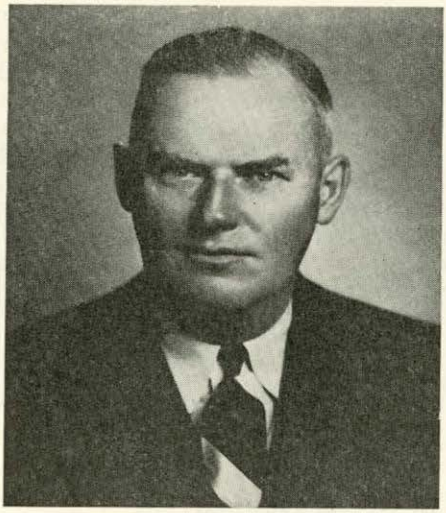
R. M. MacDONALD.

C. F. W. ILLINGWORTH, C.B.E., M.D., Ch.M., F.R.C.S. (E.), F.R.P.S. Glasgow. Doctor Illingworth is now Regius Professor of Surgery, University of Glasgow and Surgeon, Glasgow Western Infirmary.



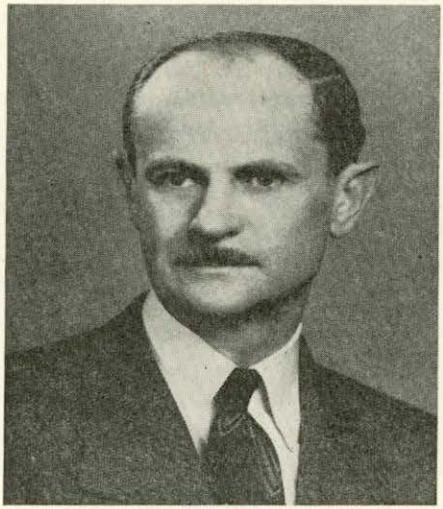
CHESTER S. KEEFER, M.S., M.D., F.A.C.P.

Doctor Keefer is now Physician-in-Chief at Massachusetts Memorial Hospitals and Wade Professor of Medicine at Boston University.



EDWARD TREMBLE, M.D., C.M., F.R.C.S. (C.), D.L.O. England.

Doctor Tremble is now Assistant Professor of Otolaryngology, McGill University, Montreal.



EDWARD MALAMUD, M.D.

Doctor Malamud is now Professor and Chairman of the Department of Psychiatry and Neurology at Boston University.

ENTERTAINMENT—N. S. CENTENARY

AT all medical gatherings a certain amount of entertainment is necessary in order to relax from the heavier scientific features of the day. A centennial however, seemed worthy of a much greater celebration.

It was with such a thought in mind that the Entertainment Committee filled a week with a variety of events so that all could in some way fittingly celebrate *our* 100*th* birthday. The Government House Tea, the Centennial Ball, the Buffet Supper, the Annual Dinner and several receptions helped comprise a week that left most of us tired but contented.

The Medical Society is grateful to many people, but particularly to Lt. Governor and Mrs. Fraser for their warmth and kindness in entertaining at a tea, to Dr. Arthur Murphy for producing and directing the short play—"Lister Visits Dalhousie"—so much enjoyed as the weeks finaél, to Dr. T. M. Sieniewicz and Dr. Percy McGrath for personally catching and smoking the salmon which we enjoyed as Hors d'ouvres at the President's Reception, as well as many others whose acts of kindness helped to make the Centennial week a memorable one.

The Committee hopes that it may look down (or up) at the Bicentenary when an even greater event will be celebrated at this East Coast Canadian port.

CLARENCE L. GOSSE.

GOLF TOURNAMENT

The following is a report on the Annual Golf Tourney held in conjunction with the Centenary Convention.

The Tournament was held at Ashburn Golf and Country Club on October 8th. The weather was terrible for golf, nevertheless thirty-seven members turned out for the Tournament. This is an excellent number, since in recent years we have only had ten to twenty. At the conclusion of the Tournament, a delightful cocktail party was held at which the trophies and other prizes were presented by Doctor and Mrs. J. W. Reid. A very exciting climax to the Tournament was provided when Doctor L. M. Morton of Yarmouth and myself ended in a tie for the first place and a six hole playoff was required to break the tie.

As Chairman of the Golf Committee I wish to thank the Society for the provision of One Hundred Dollars for prizes. This enabled us to give out fifteen prizes which in a Tournament of this kind is very desirable. I am enclosing a copy of the prize winners for your information.

A. W. TITUS.

PRIZES

1.	Low Gross	Dr. A. W. Titus, Halifax.
2.	Runner up Low Gross	Dr. L. M. Morton, Yarmouth.
3.	Low Net	Dr. P. O. Hebb, Dartmouth.
4.	Runner Up Low Net	Dr. D. L. Roy, Halifax.
5.	Best 1st Nine	Dr. C. L. Gosse, Halifax.
6.	Best 2nd Nine	Dr. Hugh MacKenzie, Halifax.
7.	Hidden Hole	Dr. A. J. R. Brady, Halifax.
8.	Best par 3's	Dr. M. M. Davis, Halifax
9.	Best Gross (out of town)	Dr. J. C. Wickwire, Liverpool.
10.	Best Net (out of town)	Dr. G. W. Sodero, Sydney.
11.	Highest on any hole	Dr. J. N. D. O'Rafferty, Halifax.
12.	Highest Gross	Dr. G. E. Fletcher, Harvey Station, N. B.
13.	Lowest on any hole	Dr. R. W. M. Ballem, Halifax.
14.	Highest Net Score	Dr. J. MacD. Corston, Halifax.
15.	Best Looking Golfer	Dr. F. L. Whitehead, Saint John, N. B.

From left to right:—Dr. H. G. Grant, Dr. G. H. Murphy, Dr. W. G. Penfield, Dr. A. E. Kerr, Dr. R. A. MacLellan, Dr. T. C. Routley and Col. Laurie are shown following the special Dalhousie Convocation, October 8th.

Dr. and Mrs. R. M. MacDonald and Professor C. F. W. Illingworth and Mrs. Illingsworth at the Annual Ball, October 6th.

The Hon. Alistair Fraser, Lieutenant-Governor of Nova Scotia and Mrs. Fraser receiving Mrs. C. B. Weld at Government House Reception, October 6th.

Dr. James W. Reid, President of The Medical Society of Nova Scotia, is shown greeting Mayor R. A. Donahoe and Mrs. Donahoe at the President's Reception, October 9th.

The Medical Society of Nova Scotia
Centennial, Halifax, N. S. October 8, 1953

PHOTOGRAPH OF DOCTORS ATTENDING FIRST BUSINESS MEETING, HELD AT DALHOUSIE UNIVERSITY

From left to right:—H. G. Grant, W. M. Roy, W. K. House, C. S. Morton, D. B. Morris, E. F. Ross, F. L. Akin, G. W. Turner, J. W. Reid, H. F. McKay, W. H. Eagar, T. M. Sieniewicz, H. R. Corbett, G. C. Macdonald, F. J. Barton.

Second row:—H. J. Devereux, C. H. Young, B. J. D'Eon, P. E. Belliveau, J. A. Noble, T. W. MacLean, F. M. Fraser, R. M. Caldwell, H. R. Peel, H. W. Kirkpatrick, J. R. Macneil, V. D. Schaffner, H. F. Sutherland.

Third row:—J. J. MacRitchie, A. L. Sutherland, S. H. Kryszek, D. L. Davison, C. H. Reardon, S. E. Bishop, R. F. Ross, D. S. Robb, R. A. MacLellan, C. L. Stuart, G. D. Donaldson, R. O. Jones, H. B. Colford, A. M. Siddall, W. W. Bennett, J. A. McDonald, C. G. Harries.

Back row:—W. D. Stevenson, E. W. Macdonald, J. A. Langille, C. B. Stewart, H. J. Martin, J. F. L. Woodbury, D. F. Macdonald, D. M. MacRae, D. MacD. Archibald, A. G. MacLeod, P. R. Little.

REGISTRATION

100th ANNUAL MEETING

THE MEDICAL SOCIETY OF NOVA SCOTIA

Halifax, N. S.

October 5th to 9th, 1953

Dr. B. E. Goodwin, Amherst
Dr. A. Ernest Doull, Halifax
Dr. W. Alan Curry, Halifax
Dr. Jean Macdonald, Halifax
Dr. J. R. Macneil, Glace Bay
Dr. H. P. Stewart, Charlottetown, P. E. I.
Dr. J. R. Sullivan, Millinocket, Maine
Dr. D. H. MacKay, Resident, Halifax Infirmary, Halifax
Dr. M. G. Tompkins, Jr., Resident, Victoria General Hospital, Halifax
Dr. D. McD. Archibald, Kingston
Dr. C. N. MacIntosh, Antigonish
Dr. C. F. W. Illingworth, Glasgow, Scotland
Dr. J. A. Noble, Halifax
Dr. A. R. Landry, Moncton, N. B.
Dr. W. E. Hirtle, Sackville, N. B.
Dr. C. E. Kinley, Halifax
Dr. A. A. Macdonald, Neil's Harbour
Dr. Francis Whyte, Grande Anse
Dr. C. L. Gosse, Halifax
Dr. A. M. Creighton, Tatamagouche
Dr. W. M. Roy, Halifax
Dr. J. E. H. Miller, Halifax
Dr. G. D. Donaldson, Mahone Bay
Dr. J. H. Charman, Halifax
Dr. H. L. Knodell, Halifax
Dr. C. B. Stewart, Halifax
Dr. A. R. Morton, Halifax
Dr. K. P. Hayes, Halifax
Dr. N. H. Gosse, Halifax
Dr. J. R. McCleave, Digby
Dr. D. F. Macdonald, Yarmouth
Dr. R. C. G. Hawkins, Halifax
Dr. H. G. Grant, Halifax
Dr. S. E. Bishop, Kentville
Dr. M. Jacobson, Halifax
Dr. J. A. Vaughan, Windsor
Dr. J. C. Vibert, Truro
Dr. J. R. Ryan, Springhill
Dr. B. MacCannell, Amherst
Dr. J. F. Walsh, St. John's, Nfld.
Dr. B. J. Steele, New Waterford
Dr. C. H. Reardon, Halifax
Dr. W. A. Murray, Halifax
Dr. N. F. Macneill, Sydney
Dr. T. H. Macdonald, Somerville, Mass.
Dr. C. M. Bethune, Halifax
Dr. C. K. Fuller, Yarmouth
Dr. B. C. Archibald, Sydney
Dr. G. M. Fraser, Halifax
Dr. A. W. Titus, Halifax
Dr. Dan Murray, Tatamagouche
Dr. H. K. Hall, Halifax
Dr. David Drury, Amherst
Dr. H. C. Read, Halifax
Dr. A. M. Marshall, Halifax
Dr. A. L. Sutherland, Sydney
Dr. Leo Green, Halifax
Dr. R. G. Girvan, Harcourt, N. B.
Dr. H. R. Phillips, Halifax
Dr. D. K. Murray, Halifax
Dr. W. W. Patton, Glace Bay
Dr. G. H. Murphy, Halifax
Dr. H. D. O'Brien, Halifax
Dr. W. L. Muir, Halifax
Dr. H. R. Peel, Truro
Dr. H. E. Britton, Moncton, N. B.
Dr. D. S. Brennan, Bear River
Dr. S. H. Kryszek, Brooklyn, Hants Co.
Dr. H. S. Everett, St. Stephen, N. B.
Dr. H. C. Still, Halifax
Dr. J. A. McDonald, Glace Bay
Dr. H. A. Ratchford, Cheticamp
Dr. R. D. Baird, Fredericton, N. B.
Dr. T. L. Farmer, Charlottetown, P. E. I.
Dr. J. S. Hammerling, Halifax
Dr. W. G. Colwell, Halifax
Dr. G. E. Tremble, Montreal, Quebec
Dr. E. M. Curtis, Truro
Dr. C. E. Stuart, New Glasgow
Dr. C. G. Harries, New Glasgow
Dr. A. W. Ross, Moncton, N. B.
Dr. A. M. House, Baie Verte, Nfld.
Dr. C. F. Keays, Halifax
Dr. W. E. Fultz, Glace Bay
Dr. H. B. Colford, Halifax
Dr. R. G. Wright, Elmsdale
Dr. J. C. Wickwire, Liverpool

Dr. A. G. MacLeod, Dartmouth
Dr. C. D. Vair, Dartmouth
Dr. I. A. Perlin, Halifax
Dr. R. J. Weil, Halifax
Dr. W. R. C. Tupper, Halifax
Dr. C. S. Marshall, Halifax
Dr. C. H. Bentley, Sydney
Dr. M. J. Chisholm, New Waterford
Dr. J. S. Wright, Moncton, N. B.
Dr. J. C. Simpson, Summerside, P. E. I.
Dr. W. H. Drover, Bay Roberts, Nfld.
Dr. C. L. LeGrow, Port-aux-Basques, Nfld.
Dr. R. M. MacDonald, Halifax
Dr. H. A. Fraser, Bridgewater
Dr. D. S. Robb, Shelburne
Dr. D. B. Keddy, Mahone Bay
Dr. P. O. Hebb, Dartmouth
Dr. L. R. Wynter, Antigua, B. W. I.
Dr. A. M. Siddall, Pubnico
Dr. W. C. Sands, Riverside, N. B.
Dr. M. D. Brennan, Dartmouth
Dr. D. C. P. Cantelope, Lunenburg
Dr. A. M. MacPherson, Kentville
Dr. J. I. Leeson, Greenwood
Dr. E. E. Kierstead, Halifax
Dr. R. R. Prosser, Fredericton, N. B.
Dr. F. J. Barton, Dartmouth
Dr. J. F. Brown, Grand Falls, Nfld.
Dr. R. S. Henderson, Halifax
Dr. R. F. Ross, Truro
Dr. R. L. Aikens, Halifax
Dr. M. H. Little, Prince's Lodge, Halifax County
Dr. L. T. Stead, Halifax
Dr. E. J. Mills, Resident, Victoria General Hospital, Halifax
Dr. L. E. Bashow, Hantsport
Dr. D. W. N. Zwicker, Chester
Dr. D. R. MacRae, Halifax
Dr. C. J. W. Beckwith, Halifax
Dr. W. K. House, Halifax
Dr. S. G. B. Fullerton, Halifax
Dr. J. R. MacLean, Halifax
Dr. W. M. D. Robertson, Dartmouth
Dr. H. R. McKean, Truro
Dr. W. B. Stewart, Salisbury, N. B.
Dr. Mark Brown, Haddon Heights, N. J.
Dr. MacN. Beck, Resident, Victoria General Hospital, Halifax
Dr. G. J. LeBrun, Bedford
Dr. C. H. Adair, Resident, Moncton Hospital, Moncton, N. B.
Dr. F. F. P. Malcolm, Dartmouth
Dr. D. E. Lewis, Digby
Dr. W. C. O'Brien, Yarmouth
Dr. R. S. Ideson, Oshawa, Ontario
Dr. J. A. Langille, Amherst
Dr. J. Urbaitis, Halifax
Dr. J. A. Webster, Yarmouth
Dr. W. E. Pollett, Halifax
Dr. G. V. Parsons, Moncton, N. B.
Dr. L. M. Beniot, Bathurst, N. B.
Dr. D. M. MacRae, Halifax
Dr. B. J. D'Eon, Yarmouth
Dr. A. C. Gouthro, Bras D'Or
Dr. R. P. Belliveau, Meteghan
Dr. R. G. A. Wood, Lunenburg
Dr. J. W. MacIntosh, Jr., Halifax
Dr. W. S. Hacon, H. Q. Eastern Command, Halifax
Dr. D. H. Bevan-Jones, Chester
Dr. E. A. Moffitt, North Sydney
Dr. Saul Green, Halifax
Dr. E. F. Ross, Halifax
Dr. R. S. Grant, Halifax
Dr. H. C. S. Elliot, Halifax
Dr. A. L. Murphy, Halifax
Dr. C. A. Gordon, Halifax
Dr. H. B. Atlee, Halifax
Dr. F. Gordon Mack, Halifax
Dr. F. C. Jones, R.C.N., Halifax
Dr. C H. Young, Dartmouth
Dr. J. H. Slayter, Halifax
Dr. J. N. D. O'Rafferty, Halifax
Dr. F. A. Dunsworth, Halifax
Dr. H. I. MacGregor, Halifax
Dr. N. B. Coward, Halifax
Dr. J. P. McGrath, Kentville
Dr. K. M. Grant, Halifax
Dr. R. W. M. Ballem, Halifax
Dr. D. R. MacInnis, Shubenacadie
Dr. L. C. Steeves, Halifax
Dr. A. G. Shane, Halifax
Dr. A. H. Barss, Rose Bay
Dr. C. H. Chipman, Resident, Victoria General Hospital, Halifax
Dr. J. W. Reid, Halifax
Dr. D. F. Smith, Halifax
Dr. J. F. Nicholson, Halifax
Dr. D. V. Willoughby, Halifax
Dr. D. A. Maciver, Halifax
Dr. W. MacIsaac, Margaree Forks
Dr. J. F. Boudreau, Halifax
Dr. D. J. Tonning, Halifax
Dr. M. R. Elliott, Wolfville
Dr. J. A. Davies, Windsor, Ontario
Dr. B. F. Miller, Halifax

Dr. R. C. Ritchie, Grand Manan, N. B.
Dr. I. M. MacLeod, Halifax
Dr. R. W. Auld, Kensington, P. E. I.
Dr. J. J. Carroll, Antigonish
Dr. C. N. Morehouse, Noel, Hants County
Dr. R. A. MacLellan, Rawdon Gold Mines
Dr. W. H. Eagar, Wolfville
Dr. M. G. Tompkins, Glace Bay
Dr. R. H. Roberts, R.C.N., Halifax
Dr. B. K. Coady, Halifax
Dr. J. W. MacIntosh, Halifax
Dr. H. I. Goldberg, Halifax
Dr. R. L. Smith, Halifax
Dr. H. B. Ross, Halifax
Dr. Agnes W. Threlkeld, Halifax
Dr. S. H. Keshen, Halifax
Dr. C. B. Smith, Pictou
Dr. J. B. Crowe, New Germany
Dr. N. W. Stott, Halifax
Dr. L. E. Cogswell, Berwick
Dr. E. I. Glenister, Halifax
Dr. R. C. Zinck, Lunenburg
Dr. H. W. Kirkpatrick, Halifax
Dr. C. M. Kincaide, Halifax
Dr. A. S. Wenning, Halifax
Dr. R. J. Brown, Moncton, N. B.
Dr. C. M. Miller, New Glasgow
Dr. L. M. Brown, Halifax
Dr. J. W. Merritt, Halifax
Dr. Fred Wrigley, Montreal, Quebec
Dr. H. B. Whitman, Westville
Dr. C. H. L. Baker, Halifax
Dr. A. W. Warnock, San Pedro, California
Dr. W. A. Gardiner, Sydney Mines
Dr. E. F. J. Dunlop, Bridgewater
Dr. H. B. Havey, Stewiacke
Dr. C. R. Baxter, Moncton, N. B.
Dr. J. G. Bruce, Jefferson City, Missouri
Dr. S. W. Williamson, Yarmouth
Dr. D. M. Cochrane, River Hebert
Dr. Jane Heartz Bell, Halifax
Dr. A. L. Winsor, Norton, N. B.
Dr. J. F. Cantwell, Halifax
Dr. H. J. Devereux, Sydney
Dr. Phyllis D. Bursey, Moncton, N. B.
Dr. L. R. Morse, Lawrencetown
Dr. F. W. Morse, Lawrencetown
Dr. D. R. S. Howell, Halifax
Dr. P. R. Little, Truro
Dr. C. N. Morrison, Halifax
Dr. E. P. Nonamaker, Halifax
Dr. A. D. Kelly, Toronto, Ontario
Dr. H. F. Sutherland, Sydney
Dr. W. M. Little, Dartmouth
Dr. H. P. Poules, Resident, Victoria General Hospital, Halifax
Dr. A. B. Crosby, Halifax
Dr. A. C. Campbell, Resident, Pathological Institute, Halifax
Dr. J. A. Delaney, Resident, Victoria General Hospital, Halifax
Dr. C. J. MacDonald, Resident, Victoria General Hospital, Halifax
Dr. A. S. MacIntosh, Halifax
Dr. E. L. Thorne, Halifax
Dr. W. T. M. MacKinnon, Amherst
Dr. T. M. Sieniewicz, Halifax
Dr. R. S. Shlossberg, New Glasgow
Dr. A. Elmik, Advocate Harbour
Dr. T. H. Earle, Upper Stewiacke
Dr. R. A. Wentzell, Resident, Victoria General Hospital, Halifax
Dr. C. S. Morton, Halifax
Dr. J. McD. Corston, Halifax
Dr. F. J. Desmond, Moncton, N. B.
Dr. L. E. Witkin, Amityville, N. Y.
Dr. R. M. Ritchie, Halifax
Dr. M. Mendelson, Resident, Nova Scotia Hospital, Dartmouth
Dr. F. R. Townsend, Resident, Nova Scotia Hospital, Dartmouth
Dr. W. W. Bennett, Bridgewater
Dr. G. C. Macdonald, Sydney
Dr. E. E. Tieman, Halifax
Dr. D. L. Roy, Halifax
Dr. W. D. Stevenson, Halifax
Dr. J. R. Brown, Dartmouth
Dr. D. I. Rice, Halifax
Dr. H. F. McKay, New Glasgow
Dr. H. G. Quigley, Halifax
Dr. H. O. Tonning, Saint John, N. B.
Dr. H. E. Christie, Amherst
Dr. R. E. Price, Halifax
Dr. O. V. Breski, Montreal, Quebec
Dr. E. T. Geraghty, Dartmouth
Dr. N. E. Stewart, Dartmouth
Dr. A. A. Giffin, Kentville
Dr. O. R. Smith, Resident, Saint John General Hospital, Saint John, N. B.
Dr. H. L. Stewart, Halifax
Dr. M. M. Davis, Halifax
Dr. C. R. B. Auld, Halifax
Dr. Roberta B. Nichols, Halifax
Dr. G. E. Fletcher, Harvey Station, N. B.
Dr. G. B. Wiswell, Halifax
Dr. A. W. Taylor, Amherst
Dr. J. F. L. Woodbury, Halifax
Dr. S. D. Dunn, Pictou

Dr. V. O. Mader, Halifax
Dr. H. W. Schwartz, Halifax
Dr. H. J. Davidson, North Sydney
Dr. C. L. Gass, Sackville, N. B.
Dr. A. E. Murray, Halifax
Dr. C. C. Stoddard, Halifax
Dr. T. E. Kirk, Halifax
Dr. C. W. Holland, Halifax
Dr. E. S. Mills, Montreal, Quebec
Dr. E. T. Granville, Halifax
Dr. R. L. Smith, Resident, Camp Hill Hospital, Halifax
Dr. D. W. Brooks, Resident, Camp Hill Hospital, Halifax
Dr. V. D. Schaffner, Kentville
Dr. R. L. Squnders, Halifax
Dr. H. R. Roby, Windsor
Dr. G. D. Denton, Wolfville
Dr. C. E. A. deWitt, Wolfville
Dr. W. O. Thompson, Chicago, Illinois
Dr. R. M. Rowter, Bridgewater
Dr. A. D. Lapp, Halifax
Dr. C. G. MacKinnon, Halifax
Dr. J. E. Higgins, Newport, Hants County
Dr. R. M. Caldwell, Yarmouth
Dr. S. Marcus, Bridgewater
Dr. C. M. Harlow, Halifax
Dr. T. W. MacLean, Westville
Dr. J. H. MacLeod, Liverpool
Dr. D. A. Campbell, New Ross
Dr. J. C. Acker, Halifax
Dr. C. U. Henderson, Resident, Victoria General Hospital, Halifax
Dr. R. O. Jones, Halifax
Dr. T. B. Acker, Halifax
Dr. N. J. MacLean, Inverness
Dr. L. B. W. Braine, Glen Margaret, Halifax County
Dr. O. R. Stone, Bridgetown
Dr. C. R. Trask, Saint John, N. B.
Dr. N. B. Trask, Dartmouth
Dr. Alice D. Kitz, Halifax
Dr. K. A. Fraser, Sydney Mines
Dr. W. J. Lamond, Sydney Mines
Dr. D. M. Grant, Halifax
Dr. W. P. Turner, Chatham, Ontario
Dr. F. G. W. MacHattie, R.C.N., Halifax
Dr. I. T. Lank, Halifax
Dr. R. T. Annand, Bridgetown
Dr. G. W. Sodero, Sydney
Dr. H. D. Oliver, R.C.N., Halifax
Dr. R. W. M. MacKay, Dartmouth
Dr. A. G. Nutlay, Halifax
Dr. W. A. Hewat, Lunenburg
Dr. G. R. I. Power, M.A.C., H. Q., Halifax
Dr. V. H. T. Parker, Stellarton
Dr. A. F. Miller, Kentville
Dr. A. E. Blackett, New Glasgow
Dr. C. S. Keefer, Boston, Mass.
Dr. D. V. Graham, Halifax
Dr. R. A. Young, Wolfville
Dr. Elizabeth M. Young, Wolfville
Dr. P. F. Ashley, Resident, Victoria General Hospital, Halifax
Dr. W. O. Coates, Amherst
Dr. D. R. Davies, Oxford
Dr. W. J. MacDonald, Truro
Dr. L. M. Morton, Yarmouth
Dr. Maureen H. Roberts, Halifax
Dr. D. F. MacInnis, Shubenacadie
Dr. R. C. Young, Kentville
Dr. M. J. Macaulay, Sydney
Dr. H. R. Corbett, Sydney
Dr. D. L. Davison, Bass River
Dr. A. Calder, Glace Bay
Dr. L. A. MacLeod, Liverpool
Dr. F. L. Akin, Windsor
Dr. H. J. Martin, Sydney Mines
Dr. G. W. Turner, Windsor
Dr. W. deM. Scriver, Montreal, Quebec
Dr. Frank G. Mack, Halifax
Dr. R. W. Richardson, Winnipeg, Manitoba
Dr. Helen M. Holden, Kentville
Dr. J. A. Muir, Truro
Dr. G. W. Bethune, Halifax
Dr. K. A. MacKenzie, Halifax
Dr. P. M. Sigsworth, Halifax
Dr. G. R. Deveau, Arichat
Dr. M. R. Macdonald, Halifax
Dr. R. A. P. Fleming, Halifax
Dr. G. H. Wheelock, Wolfville
Dr. V. W. Sobey, Resident, Victoria General Hospital, Halifax
Dr. J. A. MacCormick, Antigonish
Dr. J. C. Murray, Springhill
Dr. D. B. Morris, Windsor
Dr. Eric W. Macdonald, Reserve
Dr. F. L. Whitehead' East Riverside, N. B.
Dr. G. K. Smith, Hantsport
Dr. R. V. Ward, Montreal, Quebec
Dr. S. B. Bird, Liverpool
Dr. J. J. Quinlan, Kentville
Dr. Lewis Thomas, Halifax
Dr. P. E. Belliveau, Meteghan
Dr. W. H. Woodruff, Summerside, P. E. I.

The College of General Practitoners of Canada

FOLLOWING the passing of a motion by the General Council of the Canadian Medical Association at the annual meeting in Winnipeg this year the machinery has been set in motion which will result in the establishment of the College of General Practitioners of Canada—the first stage of labor after a five year gestation period.

The reasons, as set forth in the motion, are:

1. To raise the standards of education of the General Practitioners in order that they may raise the standards of medical care in Canada.
2. Similar movements established in the United Kingdom and the United States are calculated to foster a high level of medical care in these countries.

Among the aims and objects are the following,

1. To establish an academic body with broad educational aims.
2. To arrange for under-graduate teaching by and for General Practitioners.
3. To arrange for the presentation of Post-graduate education for General Practitioners.
4. To arrange for research in General Practice.
5. To arrange for the publication of original articles by General Practitioners.
6. To arrange for hospital staff appointments for General Practitioners.
7. To provide suitable recognition to members in the field of General Practice.
8. To do all things necessary to maintain a high standard in General Practice.

To fulfill all these aims is a prodigious task and the labor will not be easy. Many difficult questions, such as the qualifications for membership, the form of accreditation to be provided, must be answered.

Certain basic requirements must be adhered to, namely,

1. Membership in the C.M.A., the Divisional Association, and the Local Society must be a prerequisite to membership in the College.
2. No attempt must be made by the College to assume any medico-political functions which properly belong to the C.M.A.
3. The closest of co-operation must be maintained with the C.M.A., in order to maintain the strength and unity of the C.M.A. at the present high level, so that it may fulfill its proper functions.

Dr. C. L. Gass, of Tatamagouche, N. S., is the Maritime representative of the Nucleus Committee to carry on the project. Dr. Gass has a wide background of general practice both in Nova Scotia and New Brunswick and is a very happy choice. At the recent breakfast meeting of the General Practice Section, during the Centenary Celebration, Dr. Gass made an appeal for opinions from the members of this section. He feels that the successful formation of the College is dependent on the collective opinion of the whole body of General Practitioners.

A. G. MacLEOD, M.D.

General Practice Section

During the Centenary Meeting of The Medical Society of Nova Scotia, the General Practitioners Branch held a breakfast meeting at the Nova Scotian Hotel, at which the following officers were elected for the ensuing year:

President—Dr. A. G. MacLeod Secretary—Dr. F. Murray Fraser
Treasurer—Dr. C. H. Young

It was decided to appoint executive members on a geographical basis for this year, such representatives to be appointed by their County Organizations next year. The following were chosen at the meeting:

Yarmouth—Dr. A. M. Siddall
Western Counties—Dr. B. J. D'Eon
Lunenburg—Queens—Dr. W. A. Hewat
Colchester-East Hants—Dr. R. F. Ross
Halifax—Dr. C. H. Reardon
Cumberland—No appointment.
Pictou—Dr. C. B. Smith
Antigonish-Guysborough—Dr. J. A. Mac Cormick.
Cape Breton—Dr. A. L. Sutherland
Dr. H. J. Devereux
Richmond—Dr. F. Whyte

It is the hope of your Executive that in each issue of the N. S. Medical Bulletin we shall have news of interest for General Practitioners throughout the Province. In order to avoid the viewpoint becoming exclusively a Halifax one, it will be necessary for each County Representative to supply the Secretary regularly with news and views from his locality. Comments, opinions and suggestions on any subject of interest to General Practitioners will be welcomed.

In view of the approaching formation of the College of General Practitioners of Canada it is essential that we, individually and collectively, become interested in the broader aspects of our own type of practice; in view of the encroachments upon our field of activity by some specialist groups and government bodies it is essential that we become organized. Each must sacrifice a little of his individualism for the sake of the group. This is not the time to adopt the "let George do it" attitude, but rather an all-out effort on the part of every General Practitioner in the Province is necessary if the Nova Scotia Branch is to contribute toward the formation of the College of General Practitioners and the elevation of the status of the family doctor.

Dr. A. G. MacLeod has outlined the theoretical basis of the new college. In a subsequent article, Dr. C. L. Gass will give us the concrete proposals as discussed at the recent meeting of the Nucleus Committee. Consider these articles carefully and send your comments to your local representative who will forward them to the secretary.

At the Business Meeting of The Medical Society of Nova Scotia, two proposals which are well worth while, were passed:

(1) To give a subscription to the N. S. Medical Bulletin to each fifth year medical student of Dalhousie University.

(2) The Medical Society of Nova Scotia recognizing the desirability of a chair of general practice being established at Dalhousie appointed a committee to consider and investigate the possibility, keeping in mind that the cost must be contributed by our membership.

F. M. FRASER, M.D.

NOVEMBER 23rd — 28th, 1953

Post-Graduate Committee of The Faculty of Medicine in co-operation with the

Departments of Obstetrics, Gynaecology and Paediatrics

of

DALHOUSIE UNIVERSITY

presents

"A Week in Obstetrics, Gynaecology and Paediatrics"

MONDAY, NOVEMBER 23rd, 1953

8.45	Assemble in Front Hall of Grace Maternity Hospital on University Ave. Accommodation arrangements and facilities explained.
9.00-10.00	Demonstration of Care of Baby in first 10 minutes of life.
10.00-11.30	Lecture and Demonstration of X-ray Pelvimetry.
11.30-12.30	Symposium—"Toxaemias of Pregnancy."
2.00- 4.00	Gynaecological Outpatient Clinic—5th Floor V. G. H.
4.00- 5.00	Bleeding in the Ante Partum Period.

TUESDAY, NOVEMBER 24th, 1953

9.00-11.00	Gastro Intestinal Symposium: Feeding Problems, Gastro Enteritis, Vomiting, etc.
11.00-12.30	Fluid Balance—Demonstration of Paediatric Procedures, i.e., I. V. Techniques, Jugular Punctures, Femoral Punctures, etc.
2.30- 3.20	Demonstration—Vaginal Discharges.
3.20- 4.10	How to Diagnose Patient with Carcinoma of Uterus.
4.20- 5.00	Treatment of Trichomonia and Monilia.
5.00- 6.00	V. G. Hospital Departmental Staff (Gyn) Meeting. Discussion of Problem cases.

WEDNESDAY, NOVEMBER 25th, 1953

9.00- 9.50	Ward Walk—Grace Maternity Hospital.
10.00-10.50	Ward Walk—Fifth Floor V. G. Hospital.
11.00-12.30	Symposium—"Use of Endocrines today."
2.00- 3.30	Paediatric Radiology.
3.30- 4.30	Behaviour Problems in Childhood.
4.30- 5.30	Paediatric Surgery.

THURSDAY, NOVEMBER 26th, 1953

9.00- 9.50	Lecture—"Problems of Difficult Labours."
10.00-10.50	Lecture by Pharmacologist and Bacteriologist on use of present day drugs in Obstetrics and Gynaecology.
11.00-12.30	Breast Feeding—Round Table.
2.00	Symposium on the Newborn— Prematurity, Resusciation and Asphyxia, Erthroblastosis, Congenital Defects.

FRIDAY; NOVEMBER 27th, 1953

9.00- 9.50	Paediatric Dermatology.
10.00-12.30	Ward Rounds and Case Presentations.
2.30- 4.00	Prenatal Clinic.
4.00- 5.00	Film—"Why the Monthly Period."
5.00- 7.00	Overtime—Question period.

THE JOHN STEWART MEMORIAL LECTURE*

Surgery and Science

WILDER PENFIELD

THERE is a river not to be found on any map of this terrestrial globe, yet a river well known to all the sons of men, and never very far from any of us. It flows in the Realm of Time. It is Lethe, the river of Oblivion. What memories of noble persons and heroic deeds, what words of wisdom and what glorious thoughts have been engulfed in that dark, remorseless tide!

"To retrieve, if it may be, from its 'watery labyrinth' and to preserve something of the character, the appearance, the thought, and speech, the little unremembered acts—of our heroes and benefactors, as well as to keep bright the story of their life work, is the object of such orations as this———."

These are not my words. Don't be so far encouraged. These words which, by their beauty, will survive the "dark remorseless tide" of oblivion, were the words of John Stewart. These were his thoughts in the prelude of the first Listerian Oration before the Canadian Medical Association at Ottawa in 1924. In my turn, I shall do my simple best to recall to you something of the character and thought of Dr. John Stewart and of his friend and master Lord Lister, for he who would recall the one recalls the other.

There could be no better introduction to a consideration of the relationship of Surgery and Science. These men may have drunk the waters of oblivion for themselves according to the Greek myth. We in this world cannot know that for certain. But for us, they constitute a legend of growing power.

It is an honour which moves me deeply to stand before you as the John Stewart Memorial Lecturer, playing thus a role in the Centennial Celebrations of The Medical Society of Nova Scotia, of which Stewart was once the President, and sharing the pleasures and benefits of the 27th Annual Refresher Course of the Faculty of Medicine of the famous Dalhousie University. For the moment, I know, I must wear the mantle of Stewart.

Each Doctor of Medicine discovers that he wears a cloak of authority and wisdom in the eyes of his patients, if not in the eyes of his family. It covers the nakedness of our shortcomings. It causes us to stand up straight and tall, each one according to the stature God gave him.

It would appear that this mantle of ours, which embarrasses some of us not a little, was once worn by Apollo the god of purity and of the well-being of youth. According to the writings of Homer, Apollo was physician to the gods on Mount Olympus. Aesculapius was the son of Apollo, and it would seem that the father handed on his mantle to his son, for Aesculapius healed the sick with great success, such success in fact that soon there was a serious shortage of shades in Hades. So it came about that Pluto, waiting hospitably by the river Lethe, was filled with alarm. He laid this sad state of affairs before the Father of the Gods. And so it was that Aesculapius was himself destroyed by a thunderbolt from the hand of Zeus. Alas for the good physician!

Let this be a warning to Professor Willard Thompson. He may be a prominent graduate of Dalhousie University and President of the American

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*Read before the Dalhousie University Faculty of Medicine Annual Refresher Course ctober 7, 1953

Geriatrics Society. But let him consider the dreadful consequences if he and his fellow specialists should find the cure for old age! How tiresome this world would seem with no way out except by a motor crash. How sad if we were deprived of the drowsy blessings of senility by which the doors, that once stood open to the world around, are closed so softly one by one.

Pluto had much reason in his argument. "Let it be as the psalmist said: 'Man goeth forth unto his work and unto his labour until the evening'."

Now after the death of Aesculapius physician-priests built numerous temples to him and the faith they had in his power cured the Grecian multitudes.

In due time Hippocrates must have worn the mantle of Aesculapius and adorned it greatly.

John Stewart of Halifax was one who could wear the mantle without embarrassment and he has, I am sure, handed it on to other distinguished men here. "He set before us," to quote George H. Murphy, "the best ideals of our ancient calling." And if I may borrow again, I shall take the editorial words of another Haligonian, H. B. Atlee: Stewart was the "beau ideal of our profession. . .It was character," Atlee wrote, "that made him the man he was, that placed him so high above us. . .a gentle man as well as a strong one. . . the most illustrious of members, past and present, of the Nova Scotia Medical Society." High praise indeed.

In giving this lecture I wear the mantle of Stewart proudly for a little time, here in the City that he loved and before the friends who have not forgotten him. He served this University well as Professor of Surgery and as Dean. There are, no doubt, many patients who remember him, and many who could speak with greater authority than I.

When Lister left Edinbugh to accept the chair of surgery at King's College Hospital, London, he took with him his house surgeon, W. Watson Cheyne, and his senior clerk John Stewart. Sir St. Clair Thompson was an undergraduate medical student at King's at the time and he has given us the following description of the two young men.

"They were, each in his way, typical specimens of two races which are found in Scotland north of the Grampians. Watson Cheyne with his red hair and honey-coloured beard showed the Scandinavian origin of the inhabitants of Shetland. . .Stewart was a splendid specimen of the black-haired Highlander: tall, stalwart, handsome, dignified, gracious with courtly manners and soft clear speech."

Fraser-Harris has said that, "Stewart's admiration for Lister almost amounted to worship. The Quaker and the Highlander," he pointed out, "were cast in the same mould, for both were conscientious, intellectually honest, reverent and deeply religious."

There the identity stops. Stewart was a disciple. His contribution to our profession consisted in his advocacy and his practice of the new gospel, the introduction of antisepsis in surgery. Stewart returned home, to the seaport town of Pictou.

It was eleven years earlier, at the age of twenty, that he had sailed for Scotland with Captain Waters of Pictou. That was 1868, the same year that the Medical School of Dalhousie was opened. He remained in Scotland

three years, working on a farm and putting in a year's attendance at the University of Edinburgh. Then he had returned to enter medicine at Dalhousie but finished his course at Edinburgh.

So it was, from New Scotland to Old Scotland, back and forth. He continued these trips all through his life, twenty-two crossings in all.

One may imagine him clerking in the wards for Lister, a gangling medical student following the great Professor at the most exciting period of that discoverer's career. It was then that Professor Lister was demonstrating, before the eyes of an unbelieving world, that wounds could be made to heal without infection, that pus was not laudable, that a surgical hospital was not a place to be shunned but instead that it could be made a place where hippocratic healing by first intention was the rule, a place where a thousand undreamed operations might now be devised to solve, for suffering humanity, a thousand unsolved problems.

This revolution was brought about, you might say, by a bottle of carbolic acid and a carbolic spray. No wonder experienced surgeons laughed in disbelief and no wonder the little group of assistants who rallied about Lister, seeing the miracle that his science had wrought, became his disciples and devoted their lives to the spread of a new gospel. In my mind's eye I can see Stewart in the Royal Infirmary, an acolyte holding aloft the spray maker and Lister bending over a bed dressing an open wound while carbolic vapour surrounds him like an aura, a halo it would seem in the light of the lamp that shows the line of waiting beds beyond in the long dark ward on a late afternoon in Edinburgh. What a theme for stained glass!

Perhaps one might marvel that Stewart returned as he did to Pictou, leaving behind him the wards and the laboratories, the experimentation, the discussions and the doubts of Edinburgh and London.

Pictou in 1879 was a proud little seaport town. It seemed to turn its back on the rest of Canada sprawling in the new-formed union across the continent behind her. Quebec, Ontario, Manitoba, British Columbia! Their problems seemed foreign and confederation futile. Even New Brunswick was far away.

But Pictou looked out over the sea, in the direction of the sunrise, toward Old Scotland. It was not far off except for the time it took. The town might have been placed in the Hebrides instead of being planted on another continent for all the notice they took of the distance. It was Old Scotland and New Scotland and there was one people and Edinburgh and Halifax were two highland capitals.

Stewart practised surgery in Pictou. He took an interest in the lives and the pastimes of his people and remained there 15 years. Then, coming to Halifax, he became the perfect teacher, the admirable example, the beloved practitioner. He was a scholar, a gentleman, an excellent surgeon. Having listened to a voice of authority he undertook the care of the sick. The practitioner is, of course, the flower of our profession and I am glad to see this recognized by Dalhousie in the proposed award of an honorary degree to Dr. R. A. MacLellan.

The difference between Stewart and Lister, two men said to be cast by nature in the same mould, is that the one accepted authority and went to work

among his people. The other doubted as he worked and put his doubts to test again and again. Surgery for the one and surgery with the pursuit of science for the other.

The difference in these two men is the subject of my address on Surgery and Science.

What was it that made Lister a scientist as well as a surgeon? Let us look for the answer in the story of his early life.

On graduating in medicine from London's University College, Lister became house surgeon to Ericksen, author of the most popular current textbook of surgery. The book was called, hopefully; "Science and the Art of Surgery." But Ericksen was not to be considered a scientist according to my definition.

Young Lister passed his F.R.C.S. examinations at the age of 25 and so he was qualified for his practice. There had been prizes. It was all proper and highly satisfactory. The time had come for him to tour the clinics of the continent to take his wander year before setting himself up as a London surgeon. He had money enough to do as he liked.

But Lister was depressed. He looked at the surgical wards—what a lottery of life and death! Infection dogged the surgeon's every incision and seemed to leap from bed to bed. He turned back to the laboratories of University College, to William Sharpey. Sharpey was a scientist. He concerned himself with basic mechanisms in medicine. His pupil Michael Foster writing years later said of him that he was, at the time of Lister's student days, the only pure physiologist in England.

Sharpey was a Scot and he suggested to his young and discontented pupil that he should go to Scotland to visit Syme who was then Professor of Surgery at Edinburgh and old friend of Sharpey's. Syme was honest, his words few, his surgery unexcelled for that period. So, Lister went for a month's visit, but he remained 7 years, beginning all over again as Syme's house surgeon.

This tall, thoughtful young man was somehow different. He had known culture as a boy. His father, Joseph Jackson Lister, although a wine merchant from the age of 14 when he had to leave school, had "contrived, by early rising and otherwise to supplement the school education." More than that he eventually did work of great value on the theory and construction of achromatic lenses for microscopes. Indeed because of this, he became, in his own right, a fellow of the Royal Society.

The son Joseph had a boyhood desire to become a surgeon. But his father, recognizing the value of what he himself had missed, like many another father, sent him for a preliminary course in arts at University College, three years leading to the degree of B.A. before he should undertake the study of medicine. Lord Lister in later life was in the habit of advising this for young men who were considering medicine and who could find the time and money.

But at the close of his study of arts there came an unplanned interlude. He seemed to have a depression. It was called a "nervous breakdown" then as it is now. And so he was given an extended holiday in Ireland; a place of beauty that was reasonably free of intellectual distraction, a place to relax—where a man might laugh and not be asked the reason for it.

Joseph Jackson's letter written to his son at this time, in the intimate

phraseology of Quaker intercourse, gives insight into the son's state of mind:*

"It is indeed a mistake. . . . .to believe thyself required to bear burthens on account of the states of others. . . .and believe us, my tenderly beloved son, that the proper part now is to cherish a pious cheerful spirit, open to see and to enjoy the bounties and beauties spread around us:—not to give way to turning thy thoughts upon thyself, nor even at present to dwell long on serious things. Thou wilt remember how strongly Dr. Hodgkin cautioned thee on these points."

Thus although he had his B. A. at 20 years, he did not begin medical studies until he was 21 after this period of idleness. Lister had a tendency to stutter, particularly when tired or embarrassed. His hands, as pointed out apologetically by his biographer, were not long and beautiful like his mother's, hands thought then, and since, to be clever and artistic. On the contrary, Lister's hands were square and thick and the fingers short, like those of many an expert carpenter and artisan, the hands of Hunter and Kocher and Halsted and Finney and Cushing.

So it was that Lister had a year for reading and reflection. A time to doubt his own abilities and to look at life. Such periods may profoundly alter character. Edward Archibald, McGill University's greatest surgeon, had such a period of nearly 2 years during a cure for pulmonary tuberculosis. When he returned to surgery he had, as I think in consequence, a unique turn of mind. He was reflective, perceptive, different. One of the whimsical little sprites that are only found in silent places had crept into his heart. An even more dramatic change was wrought in William Halsted by a similar period as I shall describe later.

Being more mature than his classmates, Lister, even before he left medical school, turned his attention to original work in basic science. In physiology his earliest writings had to do with muscle histology, blood vessels, circulation, nervous control of blood vessels, coagulation of the blood. In the field of pathology and bacteriology, he contributed original work on inflammation, and eventually the new germ theory.

He was not interested, as many surgeons are, to make large collections of pathological specimens. How different he was from John Hunter in this respect. He did not begin by publishing a long series of cases in which the patients had been treated in a standard manner. Instead he published one case of bony exostosis removed by Syme from the humerus of a young girl, analyzing the formation of cartilage and the biological mechanism of laying down bone in it. He reported a single case of carbuncle from the practice of Professor Syme! Think of that ONE CARBUNCLE! But he took it as a text for an enquiry into the pathology of infection and inflammation.

In 1860 at 33 years of age he was made a Fellow of the Royal Society,not as a recognition of his distinction as an assistant surgeon but because of his original work in the biological sciences that are basic to surgery. He chose

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*Lord Lister by Sir Rickman Godlee, Macmillan & Co., London, 1917, page 16. Godlee who was Lister's nephew has written an excellent biography and a fascinating story. Goldee himself made history when he was first to carry out a temporarily successful operation for brain tumor at Queen Square 1884.

the unsolved problems that the practice of surgery had presented to his mind.

In the same year he left Edinburgh to accept the chair of the Regius Professor of Surgery in Glasgow, the chair now occupied with distinction by Professor Illingworth, who honours us by his presence here tonight.

At 38 he conceived the true explanation of sepsis and devised a method of treatment called antisepsis.

During those seven years in the clinic of Syme at Edinburgh and the succeeding 5 years in Glasgow, before he picked up the clue to his great discovery, he was a busy surgeon like other surgeons. But he was something more, a scientist, he was a scientist by virtue of his habit of thought.

He turned from patient to current medical literature and back to the patient. But he did not accept the pronouncements and the explanations of the surgeons and physicians about him or who had gone before him without critical consideration of the evidence. He recognized no authority of name or position.

Instead he looked at clinical problems with the eye of one who has himself done original work on microscopic structure and who has made his own enquiry into living mechanisms. He went from the patient to his simplified laboratory experiments and back again seeking cause and effect. He depended on those things that could be proven. Thus his thinking about clinical problems was scientific rather than authoritarian.

Here is the crux of the whole problem. When he looked at an osteoma he recalled the growth of cartilage and the change to bone that he had seen with his own eyes. The element of cause of local tumor growth he must have recognized as a continuing mystery. That element remains a mystery to us today while we wait for someone to pick up a clue, perhaps from new work in some other discipline of science. We are waiting for a Lister in the field of cancer, for the evolution of Science in Surgery.

He looked at a carbuncle, understanding the swelling, the redness, the central disintegration of tissue in terms of his own basic observations of inflammation and structure and circulation. He was clear about one thing—namely that the ultimate causal agent was unknown and current surgical reasoning was wrong.

I like to think that he took a special interest in Pasteur's work on putrefaction in wine because of his affection for his own father the wine merchant. Pasteur at that time had seemed to destroy minute organisms in the wine by heat. Lister knew he could not use heat in surgery. That would kill his patient. Sepsis in a wound resembled putrefaction. There must be micro-organisms at the bottom of the process.

He thought long about the problem. He tried zinc chloride, also sulphites, but without success. Then an item of apparently unrelated information came to him. The city of Carlisle was using carbolic acid to combat putrefaction in sewage. That must have seemed a far cry from the operating room but his scientific mind had narrowed the problem down to a search for something that would kill a hypothetical living organism without killing the patient. Other clinicians still believed in spontaneous generation of life and they taught it. But Lister found their proofs inconclusive!

Pasteur had shown that micro-organisms could reach his cultures through

the air. And so it was that Lister converted carbolic acid solution into a vapor to cleanse the air about the wound as well as the wound. The scheme succeeded and so it was that antisepsis won the first round against infection.

We realize now that Lister's discovery was only a step:—It is always so in science—a step toward the whole truth and the final solution.

Aseptic techniques were to follow, associated with antiseptic sterilization of the skin. A little later, at the time of the first world war, wounds were again to be treated with antiseptics such as the hypochlorite solution of Dakin. Still later the antibiotics were to appear destroying micro-organisms selectively on the basis of a new principle, without harm to the patient.

There are at least two surgeons who preceded Lister and who may be compared with him because of the value of their contributions, Ambroise Paré in the 16th century and John Hunter in the 18th century. Neither of these men had any such primary scientific training as Lister. It was far too early for that to have been possible. But both men were like him in one regard. They refused to accept traditional teaching as final authority, preferring to turn to nature itself for evidence.

Paré was a country barber's apprentice who acquired some experience as a dresser in the Hotel Dieu de Paris. He became an army surgeon without passing through the medical schools of the period and, after long and trying experiences on the battle fields of France, he came to defy tradition in the treatment of wounds. He was guided by fearless compassion for the suffering of his patients and by practical experiment. Thus it was that he established better methods of treatment and forbade gratuitous interference, enunciating the principle that God would heal if the surgeon provided care and protective dressings.

For example, at that time the common practice was to treat gunshot wounds by a first dressing of boiling oil. But fortunately his supply of boiling oil gave out one night. He compared the results by the two methods and the treatment was abandoned. Such was the level of experimentation in the 16th century.

Paré was a magnificent technician, devising many splints and new procedures. He was beloved by the people and yet treated with contempt by established physicians of his time. Paré was the only "Protestant" to be spared by royal mandate at the massacre of St. Bartholomew. But he was protestant in medicine as well as in religion.

John Hunter was born in 1728, a hundred years before Lister. He had been called, with good reason, the founder of scientific surgery. This is not the place, nor is there time, to give an account of his life and contributions.

Hunter was a surgeon, an experimentalist, a collector of everything that had to do with his changing interest in the human body. The 13,000 specimens which he gathered together and studied were passed on to the Royal College of Surgeons and I am myself convinced that his restless iconoclastic spirit still lurks in the Hunterian museum there. When at the College in Lincoln's Inn Fields, I think I have heard his cynical laughter as students walk through the collection with books in hand peering about to see the things that the text books say they should see.

He was tireless, irrascible, intolerant, lovable, fervent. He seemed to be

born with the urge of a collector, but he turned from his collecting with apparently inexhaustible energy to put the questions that presented themselves to the experimental test. Experimentation also seems to have been, in him, an inborn turn of mind. All knowledge in the field of surgical pathology was his goal but he took the body of man and the bodies of animals living and dead as the text for his authority.

No man was ever less bound by the teaching of the past. Indeed he was, to a large extent, unhampered by traditional teaching because he seemed to be ignorant of it. He did not come to surgery with a mind trained by study of basic science as Lister did. Instead he came to anatomy and to surgery with a critical and enquiring mind and created a body of basic facts which formed the beginning of surgical pathology. He showed surgeons that each of them, whatever their training, might contribute to this science and add to the collection that he left to the profession, provided he continued to look for final authority in the structure of the body and the experiments wrought there by disease.

I could choose many examples of how surgeons have brought science into their surgery. But I shall only refer to one more master surgeon, William Stewart Halsted. He is perhaps the only man to found a school of surgery on this continent unless such a claim could be made for Harvey Cushing. But Cushing, in a very real sense, was Halsted's pupil.

Halsted was Professor of Surgery at the Johns Hopkins University for 33 years from the foundation of its Medical School in 1889. He taught his pupils a new type of delicacy in the handling of tissue, introduced the use of rubber gloves in the operating room and gave an example of thoughtful scholarship in his approach to surgical problems that has had a profound effect on American surgeons.

A tragedy and a period of enforced reflection changed him as a young man and made of him the shy studious Professor that I knew when I was an undergraduate at the Johns Hopkins. As a young man, Halsted returned from study in Germany to the thundering turmoil of New York, the most urban and in many ways the most challenging city of the world. He was hailed as a rapid, brilliant operator, a popular teacher, a promising surgeon in the best tradition of New York's Roosevelt Hospital.

Then there came upon him the tragic addiction to cocaine long guarded as a secret by his friends. It had been acquired while testing the newly discovered drug upon himself before the dangers of habituation were understood. The result was a gradually increasing confusion of thought that for a time puzzled all who knew him. An unworthy medical article appeared under his name at that time which bears testimony to his strange mental breakdown. His close friend, the pathologist William Welch, recognized the cause of the trouble and came to his rescue.

Together they went off on a long sea voyage out to the Windward Islands and back. It was heroic treatment in that tiny schooner which carried these two heroes of American medicine through the stormy solitude of the sea. There followed nine months of seclusion in the Butler Hospital, and then at last Halsted emerged—cured but changed. There was a transitional period in Welch's Laboratory. Then he took over the Department of Surgery as Osler did the Department of Medicine.

The tragedy and the period of solitude made him different. We might all of us do more meaningful work, make more strategic approach to problems, if we turned aside to seek a distant perspective.

I have talked tonight about the heroes of our profession. Hero-worship is good and I have no doubt that the students who graduate from Dalhousie are marked by the high tradition of John Stewart. A student may gather his heroes by personal contact, by hearsay or through his studies, but a professional man is poor indeed who has no heroes. They go with him through life. They may sit with him when he is alone or in time of doubt. But he has no right to claim them, and they are not truly his own, unless they have marked his life and moulded it in some way.

Science for a physician is the same as science for a surgeon, with no more than a change in emphasis. It makes little difference whether a man is physician or surgeon when he studies the basic science of the respiratory system, the gastro-intestinal tract, the reproductive or the nervous system. Practice is different, very different, but our scientific preoccupations are essentially the same.

Few can make such a successful adjustment between surgery and science as Joseph Lister did. Many have not had the advantage of preliminary training in the arts. Many could not indulge in the long period of monastic contemplation that came to Lister and Archibald and Halsted. Many never thought of carrying out original work of their own until after graduation.

All of us must begin to practise our profession in the light of traditional teaching and current reading. That is what surgery is, and medicine too. Much is demanded of us. The surgeon, for example, must master special operative skills, as well as all the other systems of knowledge that are listed as prerequisite in the catalogue of medicine.

But there is much more than that. Each surgeon and physician must understand the meaning of compassion. Being alert to the hopes and the fears of his patients, he must qualify as their confidant, councillor and judge.

There is a sort of flush of conscious knowledge that comes to the graduating medical student along with his doctor's diploma. But, alas, that consciousness is all too brief. Once entered into practice, he faces his failures. There will always be some who take these failures as a challenge. The medical man, who is made of the stuff that scientists are made of, will then set out to find what is wrong for himself. He will realize that final authority is not to be found in Professors' lecture notes nor yet in text books. And so he will turn at last to Nature and recognize that final authority is lying in the bed, before him, with the patient.

Thus, it may be that a day of second graduation will come to him—when he has studied his unsolved problem during life and in death, on the operating table and afterward, with patience and with determination. Then he may pass through the gates of science into another world. He will find himself a member of the most honored company of explorers—and he will feel a new excitement like a cool wind coming down to him from the mountains of the unknown land.

Some will be worthy to wear the mantle of John Stewart and some perhaps the mantle of Lister.

The Lung as a Mirror of Systemic Disease

PART III, Continued

Eli H. Rubin, M.D.

DISEASES OF THE SKIN AND MUCOUS MEMBRANES

Systemic Lupus Erythematosus: With increasing recognition of systemic lupus erythematosus as a systemic disease, internists are becoming more familiar with this intriguing condition which for many years was largely in the domain of dermatologists. Keil is largely responsible for dissociating lupus erythematosus from tuberculosis as well as pioneering in the concept that a number of skin diseases, including systemic lupus erythematosus, are only outward manifestations of more profound disturbances affecting deeper organs and tissues of the body. The LE test, now widely applied in diagnosis, as well as the use of cortisone and ACTH in the treatment, have had a strong influence in popularizing the disease among physicians at large.

Disseminated lupus erythematosus affects almost exclusively females, chiefly those of the second and third decades of life (Fig. 25A). The appearance of the skin is characterized by a butterfly erythematous rash on the bridge of the nose and cheeks. The skin is sensitive to light, drugs and irritants of any type. Older lesions show atrophy, telangiectasis and pigmentation; aberrant forms are not uncommon, including instances in which cutaneous lesions are absent or appear late in the disease. Systemic involvement is associated with fever, joint pains, lymph node enlargement and a prolonged remissive course. Symptoms and signs referable to pleuropulmonary involvement include cough, dyspnea, chest pain, bloody sputum or frank hemoptysis, pleural friction rub and the early appearance of fluid in one or both pleural cavities. Occasionally the fluid is hemorrhagic, the blood probably originating in petcehiae in the pleural serosa. Systemic lupus erythematosus is usually fatal, although individual cases have been reported where the disease had lasted as long as twenty years.

The pathological changes in diffuse lupus erythematosus are found chiefly in the heart, kidneys, bone marrow and serous membranes. The changes are of a two-fold nature; (1) Vascular involvement consisting of either simple dilation of small blood vessels or proliferative lesions of the lining epithelium of capillaries, arterioles and venules, often in association with thrombi occluding the vessels. There are also degenerative and necrotizing vascular lesions. (2) Fibrinoid degeneration of connective tissue of the mesenchymal organs resulting in fragmentation of these elements, swelling and condensation of the interfibrillar ground substance eventually leading to sclerosis. This feature is also shared by diffuse scleroderma, dermatomyositis and others of the so-called, collagen group of diseases.

Laboratory procedures of value include the presence of leukopenia, unless there is an associated infection in which case there may be leukocytosis, a rapid blood sedimentation rate and an inversion of the A/G ratio due to a hyperglobulinemia, the latter made up chiefly of the gamma fraction. This occurrence is believed to account for the occasional false Wassermann reaction encountered in this disease. The presence of inclusion bodies, so-called LE cells, in the peripheral blood and bone marrow is a decisive diagnostic finding (Fig. 25B).

The pleuropulmonary manifestations of systemic lupus erythematosus have received little attention probably because the lungs do not show the dramatic features of the disease as do the heart, kidneys, joints and hemopoietic organs. Yet there is hardly a patient with systemic lupus erythematosus who does not show involvement of the lungs, especially the pleura, at one time or another during the course of the disease. In an analysis of 18 autopsied cases of systemic lupus erythematosus, including one of their own, the Reifensteins found pleuritis with effusion a constant feature. They noted that it was common for signs of pulmonary involvement to be present for many months during the course of the disease. Thirteen of the 18 cases had pulmonary consolidation and an additional 4, congestion or partial collapse of the lungs. In most instances the consolidation was of a patchy nature; in a few it was lobar. Griffith and Vural, in a similar study of 18 autopsied cases, found 16 with abnormalities in the lungs and pleura. Bille, also Thorell, noted roentgenological changes in 5 of 15 cases of disseminated lupus erythematosus. The abnormalities consisted of small effusions in one or both costophrenic sinuses and streak-like or mottled infiltrations subpleurally in the lung parenchyma. Fig.s 25 C & D illustrates the appearance of the chest x-ray in a classical instance of systemic lupus erythematosus with postmortem confirmation.

Scleroderma: For many years dermatologists have been intrigued by occasional encounters with patients, usually females, possessing a peculiarly leathery-hard skin (scleroderma). The change in skin texture is noticed first in the hands, later on the face, neck and trunk. Two major types of scleroderma are recognized; a circumscribed and a diffuse form. The latter is in most instances a cutaneous manifestation of a progressive systemic disease which may involve the gastrointestinal tract, especially the eosophagus, the terminal phalanges of the fingers, the skeletal muscles, thyroid, kidneys, heart, lungs and other structures. In addition, the disease is often featured by the deposition of calcium salt in soft tissues; calcinosis. The resulting induration and stiffening of affected organs interferes with their function leading to various symptoms and complications.

The pathological changes in scleroderma follow a fairly uniform pattern. The hardening of the skin and mucous membranes is the end result of a process which begins as a diffuse, non-pitting edema of the connective tissue. After the edema fluid absorbs the stroma is replaced by fibrous tissue leading eventually to atrophy of the skin and underlying structures. An accompanying vascular disturbance manifests itself in arteriolar spasm and obliteration of small blood vessels with a corresponding reduction in blood flow of the parts. When the process affects the skin supplied by the digital arteries, a frequent occurrence, the scleroderma may be associated with Raynaud's disease. The latter may precede recognizable sclerodermatous changes in the skin. A fully developed picture of scleroderma reveals a mask-like face with puckered lips, the skin smooth and glistening with mottled pigmentation, at times depigmentation, about the nose and mouth. The hands may show the stigmata of Raynaud's disease with absence of digital phalanges (Fig. 26 A & B).

The pulmonary changes in scleroderma are featured by a sclerotic process which manifests itself either in (1) a diffuse interstitial fibrosis with

thickening of alveolar walls, obliteration of air spaces and compensatory emphysema or (2) a similar picture accompanied by small cystic changes, the latter probably representing a more advanced stage of the disease. The lung is small and contracted; bronchiolectasis is frequent. Postmortem studies have shown that the interstitial fibrotic changes in the lungs are part of a systemic reaction. There is reason to suspect that occasional instances of, so-called, indeterminate diffuse pulmonary fibrosis or diffuse cystic disease of the lungs of unknown origin may represent scleroderma of the lungs although dermal changes may not be demonstrable.

The clinical features of scleroderma of the lungs are in keeping with the anatomic changes. As more alveoli are compromised in the fibrotic process, dyspnea and cyanosis became more severe. Orthopnea appears with a failing heart. Death may follow acute asphyxia or as a result of chronic cor pulmonale. The heart itself may be the seat of sclerodermatous changes. At any stage, an intercurrent infection may terminate the course of the disease. The records of the Montefiore Hospital in the past fifteen years contain three instances of scleroderma in association with malignant neoplasm, including one with carcinoma of the pleura probably originating in the lung. In view of the frequent association of acanthosis nigricans and dermatomyositis with malignant neoplasms, this observation is worth mentioning.

The roentgenologic appearances of scleroderma of the lungs reflect the pathological changes. In the presence of emphysema the roentgenogram may fail to reveal significant deviation from the norm although widespread interstitial fibrosis may be present. In uncomplicated cases the lungs show fine or coarse striations permeating both organs most pronounced in the inner two-thirds and bases; the apices are often free or may even show hyperillumination (Figs. 26 C & D). Depending on the nature of the process, the lungs may or may not show honeycombing. In later stages of the disease, the roentgen findings become less distinctive as a result of increasing evidence of infection and suppuration. In the final stages, the lungs often reveal, in addition, evidence of congestion due to a failing heart.

Dermatomyositis: This disease has certain features in common with lupus erythematosus and scleroderma but in other respects shows individual characteristics. Dermatomyositis affects more often males of advanced age. The disease involves the skin, subcutaneous tissues and muscles. It may run an acute but, more often, a chronic course. The onset is insidious with fatigue, muscle pain, weakness and lassitude. Sooner or later cutaneous changes appear with puffiness of the face and an erythematous rash involving the neck, ears, chest and shoulders. The erythema affects especially the dorsum of the hands at the phalangeal joints. The fingers become stiff and painful. The weakness of muscles is bilateral and symmetrical; when pronounced, it may interfere with deglutition and respiration, leading to aspiration pneumonia. Histologically the affected parts reveal changes of a nonspecific character consisting of edema of interstitial tissues, lymphocytic infiltration and necrosis of muscle fibers. The changes lead eventually to atrophy and contractures.

Pulmonary involvement in dermatomyositis, as an intrinsic manifestation of the disease is not a feature of the condition. However, increasing numbers of cases are being reported of the coexistence of malignant neoplasm,

an association which appears to be more than a coincidence. Brunner and Lobraico referred to 17 cases of dermatomyositis and malignant neoplasms reported in the literature, and added one of their own. Curtis and associates reported 8 cases of dermatomyositis and malignant disease from a single institution. Of a total of 45 patients with dermatomyositis, reported by the last mentioned, this represents almost 18 percent of the material. Of particular significance is the fact that 6 of the 8 patients noted improvement in their dermatomyositis soon after treatment was instituted for their neoplasms, an observation noted by others.

Of special interest, from the viewpoint of the present discussion, is the association of dermatomyositis and bronchiogenic carcinoma and mediastinal tumors. Forman cited several instances of dermatomyositis and malignant neoplasms, including one in association with bronchiogenic carcinoma and two with mediastinal carcinomas. Sheard also described several of dermatomyositis and neoplasms including one of metastatic neoplasm of the pleura. This author refers to an instance reported by Quiroga and Bottrich of dermatomyositis associated with pulmonary carcinoma. McCombs and MacMahon also reported an instance of dermatomyositis and metastasizing bronchio-genic carcinoma. Church, in discussing Forman's case, relates of an unusual instance in which a bronchiogenic carcinoma appears to have arisen at about the same time as the dermatomyositis. I have met with a similar experience in a man of 63 who developed symptoms and signs of dermatomyositis and of a bronchiogenic carcinoma at approximately the same time (Fig. 27).

Acanthosis Nigricans: This disease is characterized by the presence of darkly pigmented, furrowed areas arranged symmetrically on the exposed surface of the body, especially the axillary, inframammary, antecubital and crural folds. The hyperkeratotic skin and proliferation of epithelium often results in small, warty growths. Two forms of acanthosis nigricans are recognized: (1) a juvenile or benign form in young people, occurring especially at the time of puberty and (2) an adult or malignant form. The latter, for some unexplained reason, is often associated with visceral carcinoma. Because of the high incidence of malignant abdominal neoplasms it is claimed that a diagnosis of acanthosis nigricans in an individual of advanced age justifies an exploratory laparotomy. In a review of 395 instances of acanthosis nigricans reported in the literature, Curth found cancer in approximately one-half of the cases, carcinoma of the stomach accounting for 70 percent of these. Cancer of the lung has been reported in only three cases. The following is an additional instance of this combination.

Fig. 28A is of a man of 42 with acanthosis nigricans and carcinoma of the right upper lobe who was under my observation for a brief period in 1947. The symptoms were moderate cough and bloody expectoration. The skin in both axillae and groins was dry, darkly pigmented and ridged, with minute papillae projecting above the surface. Several dermatologists confirmed the diagnosis of acanthosis nigricans. A chest x-ray revealed a large, homogeneous spherical density in the superior aperture of the right hemithorax (Fig. 28B). Biopsy of a supraclavicular lymph node showed squamous cell carcinoma. Radiotherapy was applied but the patient went downhill and died. An autopsy was not obtained.

Mycosis Fungoides: Mycosis fungoides is a disease characterized by erythematous, eczematoid, urticarial or mixed lesions of the skin which gradually infiltrate and thicken the epidermis producing nodular, ulcerative or fungating masses. As may be erroneously deduced from the name, the disease is neither a mycotic infection nor a fungating tumor; nor is it limited to the skin. Some investigators believe mycosis fungoides is a tumor-like disease; others consider it a neoplastic disorder of the reticuloendothelium; still others include the condition among the malignant lymphomas because the terminal picture may assume the features of Hodgkin's disease, lymphosarcoma or lymphatic leukemia. It is universally agreed, however, that the skin lesions are only an outward expression of a generalized disease.

Kuznitzky, in 1916, was among the first to focus attention to the pulmonary involvement in mycosis fungoides. He described three cases which showed roentgenologically prominent hilar markings and infiltrations of the adjacent lung parenchyma. In 1940 Werth, in a review of the pulmonary findings of mycosis fungoides, found reports of 31 cases which made reference to the lungs but very few included chest x-rays. The paucity of adequate descriptions of the pulmonary manifestations of mycosis fungoides is undoubtedly due to the failure of most dermatologists to have chest x-rays taken of patients with skin diseases. This is graphically illustrated in a recent study of Bluefarb and Steinberg who reported four cases of mycosis fungoides in which the chest x-rays showed round infiltrates in the lungs. In three of these the nature of the pulmonary involvement was verified at autopsy; the fourth showed clearing of the infiltrations following treatment with nitrogen mustard and radioactive phosphorus. An illustrative instance of the roentgen findings in a patient with mycosis fungoides is shown in Fig. 29.

Neurocutaneous Diseases: There are a number of diseases which have been favorite topics of discussion by neurologists and, more recently, internists because the several syndromes are occasionally associated with Addison's disease, acromegaly, myxedema, developmental defects, neoplastic formations mental deficiency, epilepsy and other bizarre combinations. With widespread use of routine chest roentgenography, physicians interested in chest diseases, as well as thoracic surgeons, are also becoming increasingly interested in this intriguing group of diseases.

The neurocutaneous syndromes include a group of disorders involving a heterogeneous combination of structures and tissues. Heublein, Pendergrass and Widmann, in a comprehensive review of the subject, quote Zimmerman to the effect that the several neurocutaneous syndromes are probably closely allied, some manifesting themselves externally, others internally. These authors distinguish four major groups: (1) Bournevill's Tuberous Sclerosis (Epilia), (2) von Recklinghausen's Neurofibromatosis, (3) Angiomatosis Cerebri, associated with Trigeminal nevus (Sturge-Weber's Disease, Parkes-Weber-Dimitri's Disease), and (4) von Hippel-Lindau's Disease. The first and second may be associated with pulmonary manifestations as an integral part of the disorder.

Tuberous Sclerosis: This is a rare condition characterized by a bizarre combination of organ involvements: mental deficiency, epileptiform seizures, an acneform, butterfly rash on the face and tumors which may affect various parts of the body, particularly the brain, kidneys and eyes. Periungual and

subungual fibromas as well as skeletal changes are often encountered. Pathologically, the disease is featured by potato-like sclerotic patches involving chiefly the surfaces and ventricles of the brain, hence the name of the syndrome. Calcified areas may be demonstrable roentgenologically in the calvarium and within the brain substance.

Berg and Zackrisson reported three cases of tuberous sclerosis showing peculiar cystic changes in the lungs. Particularly interesting was the discovery of the disease in two sisters both of whom had adenoma sebaceum of the face and ungual fibromas of some of the fingers and toes. A brother of these two sisters also had adenoma sebaceum and calcification of the brain. A familial occurrence of the disease has been noted by others. The chest x-ray of one of the sisters who later died of asphyxia, and in whom it was possible to verify the diagnosis at autopsy, revealed "a well-defined net-like pattern symmetrically spread over both lung fields, caused by closely situated, round translucencies, some so small as to be hardly visible, others varying in size up to that of hazelnuts. The translucencies were separated by relatively narrow, thin septa."

The roentgen changes in the case described were in keeping with the pathologic findings. The lung tissue was the seat of innumerable large and small cysts embedded in tissue which, on histological examination, were found to consist of connective tissue, blood vessels and, quite strikingly, smooth muscle elements having an unmistakable character of tumor tissue. Tumorous changes were also found in the brain and kidneys. The lung specimens and chest x-rays of the patient reported by Berg, Veglens and Zachrisson, of one reported by Samuelsen, and of another reported by Ackerman, appear identical. The cystic changes resemble roentgenologically those seen in lipoid storage disease and cystic lung described previously.

von Recklinghausen's Disease: This disease, described by its discoverer in 1882, is most often seen in the form of multiple fibromas and neuromas of the skin with or without cutaneous pigmentation. Neurofibromata within the thoracic cavity may be encountered as part of a generalized process affecting the skin, skeletal and other organs. In the thorax the favorite location of these tumors is in the upper chest, retropleurally, adjacent to the spine. The tumor may have an hour-glass connection with an extension of the process in the spinal cord. Intrathoracic neurofibromas have been found in association with the acoustic, intercostal, vagus and sympathetic nerves. The lung parenchyma is rarely involved. A rare instance of solitary benign neurofibroma within the substance of the lung removed surgically was reported by Touroff and Sapin in 1949. Search of the literature by these authors revealed one case, published by Bartlett and Adams in 1946, of a solitary neurogenic tumor attached to the left main bronchus which was removed by pneumonectomy. The third case, cited by Touroff and Sapin, was one of multiple neurofibromas limited to the lungs, described by Aronson and the writer in 1940. The disease in this instance was found in a Negro woman of 57 who had diabetes as well as syphilis. The chest x-ray revealed scattered round densities symmetrically distributed in both lungs. The differential diagnosis included tuberculosis, syphilis, metastatic carcinoma or multiple lung abscesses, The nature of the disease was established postmortem.

According to Penfield's classification, the tumor could be classified as a "perineural fibroblastoma" (Fig. 30).

Pleuropulmonary Manifestations of Abdominal Diseases

There are a number of abdominal diseases which may cause abnormal changes in the lungs and pleura. The frequent association of pulmonary infections and cystic fibrosis of the pancreas has been discussed in Part 1. For the moment we are not concerned with the intraabdominal malignancies or suppurations complicated by pulmonary or pleural metastases.

A word about fluoroscopy of patients with suspected supra—or subdiaphragmatic disease. During screening, if the diaphragm is normally placed and moves freely, it is most unlikely that one is dealing with disease involving the muscle. Since only the parietal pleura, including the peripheral portion of the diaphragm, is sensitive to pain, the absence of discomfort during respiration is additional evidence that any lesion which may be present in the region of the diaphragm does not implicate the muscle, excepting possibly the central, tendinous portion. As far as roentgenography is concerned, because of the additional information which may be obtained by including in the chest exposure the subdiaphragmatic region, it is good practice to take x-rays with the long axis of the cassette paralleling that of the chest. In very obese individuals or in the presence of traumatic chest injuries and under other exceptional circumstances it may be preferable to place the long axis of the cassette horizontally.

In the limited space available it will be possible to give the briefest description of the more important abdominal conditions which may show signs of their presence in the chest by causing abnormal roentgen changes.

Surgical Diseases: In the course of routine chest roentgenography of newly admitted patients to a general hospital with "acute surgical abdomens," one finds occasionally a collection of free air under one or both leaves of the diaphragm. The accidental discovery of a pneumoperitoneum in such cases indicates the presence of a perforated abdominal Viscus At other times one may encounter the diaphragm abnormally elevated by gaseous distention of the bowel, the latter possibly showing fluid levels. These findings are in keeping with strangulation of a portion of the gut. Kirklin and Gilbertson draw attention to the importance of examining the air-filled upper segment of the stomach. A shadow caused by a tumor mass in the cardia may be visible in the routine chest x-ray. In addition, the chest x-ray is of inestimable value in the detection of pleuropulmonary complications following abdominal operations. The incidence of atelectasis, pneumonia and pleural effusion is notoriously high after operations on the stomach, duodenum and biliary tract. Routine chest x-rays following upper abdominal surgery reveal abnormal roentgen changes in as high as 70 percent (Rudnikoff and Headland). In most instances there are no symptoms or signs of pleuripulmonary involvement to direct attention to these complications and the patient may leave the hospital with a smoldering focus in the lung or pleura which may cause trouble later.

Roentgen Findings in the Chest in the Presence of Other Abdominal Diseases: The chest x-ray is instrumental in the discovery of displacements and intrinsic disease of the diaphragm (eventration, herniation, tumors) as well as in local-

izing collections of fluid or pus immediately above or below the muscle. A discussion of these and related subjects is beyond the scope of this review. However, there are two types of abnormal changes detectable in the chest x-ray, associated with intraabdominal disease, which deserve comment. These are the occurrence of linear, horizontal striations, and/or unexplained pleural effusions the recognition of which is often helpful in diagnosis of obscure abdominal disease.

1. Linear densities running transversely in one or both lower lung fields may be found in association with intrathoracic as well as abdominal disease, more often with the latter. Fleischner was among the first to draw attention to the significance of these linear striations, often referred to as "Fleischner lines." He suspected that they represented linear areas of atelectasis rather than pleural thickening, a belief held hitherto. Subsequent investigations have served to confirm Fleischner's observations. The atelectatic area is discoid in shape lying in more than one plane of the lung. The disk-like or plate-like atelectatic areas appear roentgenologically either as single or multiple horizontal, linear densities in one or both lower lung fields, at times in association with pleural effusion.

Marks and Nathan draw attention to the original studies of Fleischner respecting the probable mechanism involved. It is postulated that as a result of intrathoracic or intraabdominal disease any interference with diaphragmatic motion causing shallow breathing may permit plugging of bronchi with secretion. If the obstruction occurs in small bronchi and bronchioles, plate-like atelectasis may result. The affected areas assume a horizontal position in the chest x-ray because of the relative fixation of the mediastinum medially and the negative intrapleural pressure peripherally thereby preventing vertical collapse of the involved portion of the lung. An accompanying emphysema also favors horizontal retraction of the affected parts. Linear atelectasis has to be distinguished from healed pulmonary infarcts which have shrunken asymmetrically, interlobar pleuritis and other abnormalities which, for lack of space, cannot be discussed here.

In a study of 7,064 hospitalized cases, Marks and Nathan found 29 with linear atelectasis; 20 percent occurring in patients with intrathoracic disease and 80 percent, with intraabdominal disease. The authors list the following abdominal conditions which they and others have found to be associated with linear atelectasis.

Inflammatory Lesions
- Liver abscess
- Subdiaphragmatic abscess
- Acute cholecystitis
- Subacute pancreatitis
- Acute pancreatitis
- Periappendiceal abscess
- Perforated peptic ulcer

Neoplasms
- Ovary
- Gallbladder
- Ileum
- Transverse colon

Miscellaneous Lesions
Hepatic cirrhosis
Incarcerated abdominal hernia

2. The abdominal conditions listed above which may cause pulmonary atelectasis of the type described may also provoke pleural effusion. In most instances the pleural effusion is due to direct extension of the inflammatory or neoplastic process to the diaphragmatic pleura. In the presence of acute subdiaphragmatic disease one may also encounter a transient, "sympathetic" effusion of questionable etiology; usually the fluid is part of the infectious process. Of Special interest, from the viewpoint of the present discussion, is the finding of a large collection of fluid in the chest, usually a right-sided hydrothorax accompanied by ascites in patients with intraabdominal tumors, notably ovarian tumors, also in association with cirrhosis of the liver and several other conditions.

An unexplained association of benign ovarian tumors with hydrothorax and ascites had been known for many years but it was not until Meigs and Cass in 1937, and in later communications, again drew attention of the profession to the condition that the syndrome became a matter of common knowledge. Heretofore the discovery of a pelvic tumor complicated by fluid in the chest and abdomen was ipso facto evidence of a carcinoma with metastases and the patient was doomed to die without any attempt made at treatment. The importance of recognizing, so-called, Meigs' syndrome lies in the fact that fluid in the chest and abdomen may accompany benign tumors and removal of the latter is followed by spontaneous absorption of the fluid leading to the speedy recovery of the patient. In the original communications by Meigs and his associates reference was made to fibroma of the ovary. The list of tumors which may be associated with hydrothorax and ascites has since been enlarged to include pseudomucinous cysts of the ovary, theca and granulosa cell tumors, fibroadenomas, uterine tumors and even malignant tumors of the ovary and uterus without demonstrable metastases to the chest. Meigs' syndrome has been encountered most often in women around the age of 50 but individual cases have been described in females ranging in age from 9 to 77 years.

The manner of development of hydrothorax in Meigs' syndrome is still not clearly understood. Were it known it would probably explain also the occasional occurrence of hydrothorax in patients with cirrhosis of the liver, pseudocysts of the pancreas and with several other conditions. Probably many more patients with ascites develop fluid at some stage of their disease than is suspected inasmuch as 300cc. of fluid barely obliterate the costophrenic sinus (Rigler). There is also reason to suspect that hydrothorax may often be associated with ascites since the latter cannot always be detected clinically. The possibility of an abnormal communication between the pleural and peritoneal cavities in some instances cannot be dismissed as shown by a case reported by Williams in which a pleural effusion was apparently due to rupture of the diaphragm in the patient with long-standing ascites due to Laennec's cirrhosis of the liver.

In the majority of cases of Meigs' syndrome, a combination of causes are probably at play as may be gathered from the following: The diaphragm is richly supplied with lymphatics and it takes only a few minutes to transfer

particulate matter from the peritoneal surface of the diaphragm to the subpleural lymph nodes and vessels on the superior surface of the muscle. About 80 percent of the material is carried by the subpleural lymphatics to the dorsal surface of the sternum and thence to the right lymphatic and thoracic ducts (Lemon). The preponderance of right-sided hydrothoraces is partly explained by the better development of diaphragmatic lymph channels on the right side and the fact that the pulmonary lymphatic drainage takes place almost entirely through the right lymphatic ducts. An additional factor in the causation of right-sided hydrothorax may be found in the preference of most patients to lie in the right recumbent position. The infrequency of massive hydrothorax in the presence of ascites of whatever cause speaks for an interplay of many factors which cannot be resolved by a single formula.

Concluding Remarks

These pages dealt with the intrathoracic manifestations of a number of systemic diseases, including those of metabolism, blood, skin and neurocutaneous structures, those of probable allergic origin and of several abdominal conditions. The scope of the presentation and the limited space available did not permit inclusion of the pleuropulmonary changes accompanying cardiovascular diseases, generalized infections and metastatic neoplasms.

The purpose of the review was to draw attention to the wealth of information often available in the examination of the routine chest x-ray, not only in the diagnosis of major diseases of the lungs and pleura, but of diseases commonly included in the broader field of "internal medicine" and its subspecialties; viz, dermatology, allergy, metabolism, endocrinology, hematology and neurology. Text books on diseases of the chest, at most, give passing mention to many of the conditions described.

Diseases are seldom limited to one organ. An organ may not only be the site of disease but may reflect, in addition, what is going on in distant organs and tissues. In fact, the presence of a systemic disease may be detected earlier and its nature better understood in its mirrored appearance in organs ordinarily less vulnerable to its effects. To the ophthalmologist, the interior of the eye may serve as a mirror of internal disease; so does the skin to a dermatologist and, as has been attempted to show in these pages, this applies also to the physician interested in chest diseases.

Acknowledgements: Several of the patients referred to in the review were treated on the wards of the Medical and Pulmonary Divisions of the Montefiore Hospital, New York City, under the direction of Drs. Louis Leiter and Robert G. Bloch, respective Chiefs of the Divisions. Much of the background information relating to the pathology of the various conditions described was obtained from the records of the Division of Laboratories of Montefiore Hospital under the direction of Dr. Harry M. Zimmerman, Chief of the Division.

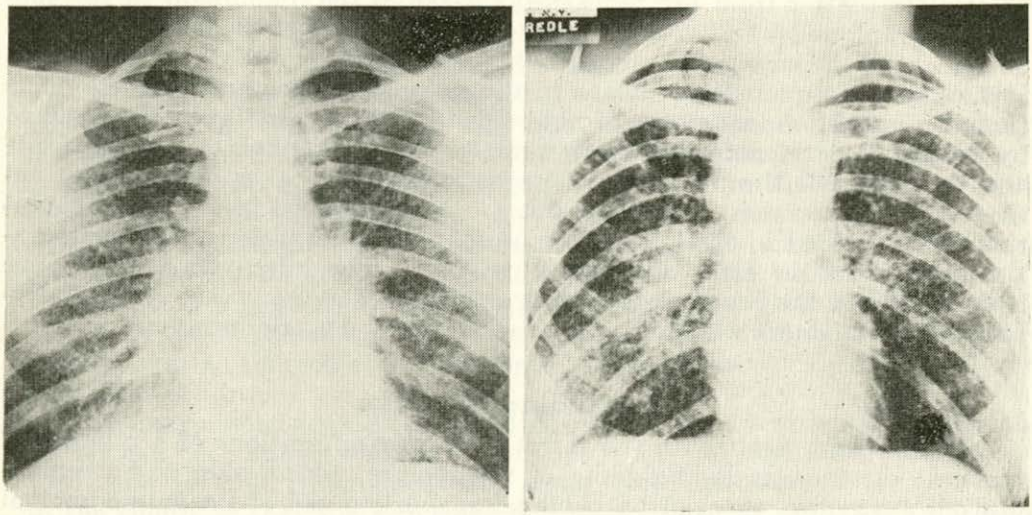

Figure 24.—Sarcoidosis (parenchymal forms). A. Miliary and reticular infiltrations evenly distributed in both lungs. B. Nodular infiltrations in both lungs; moderate enlargement of right hilar and paratracheal lymph nodes. (Biopsy of lymph node consistent with sarcoidosis. Complete clearance within four years. In the interim patient gave birth to two healthy children.

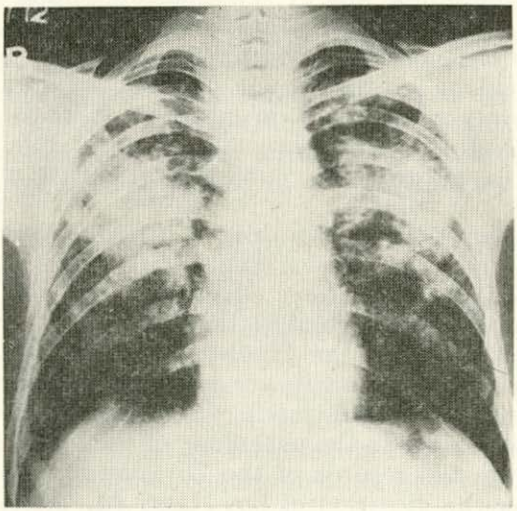

Figure 24.—(Cont'd) C. Dense infiltrations in both upper lobes, apices and bases hyperilluminated. (Biopsy of lymph node consistent with sarcoidosis. In the course of nine years increasing fibrosis and emphysema caused by chronic cor pulmonale; autopsy showed marked fibrosis and nodularity; no evidence of caseation; no acid fast bacilli in tissues; right ventricle hypertrophied).

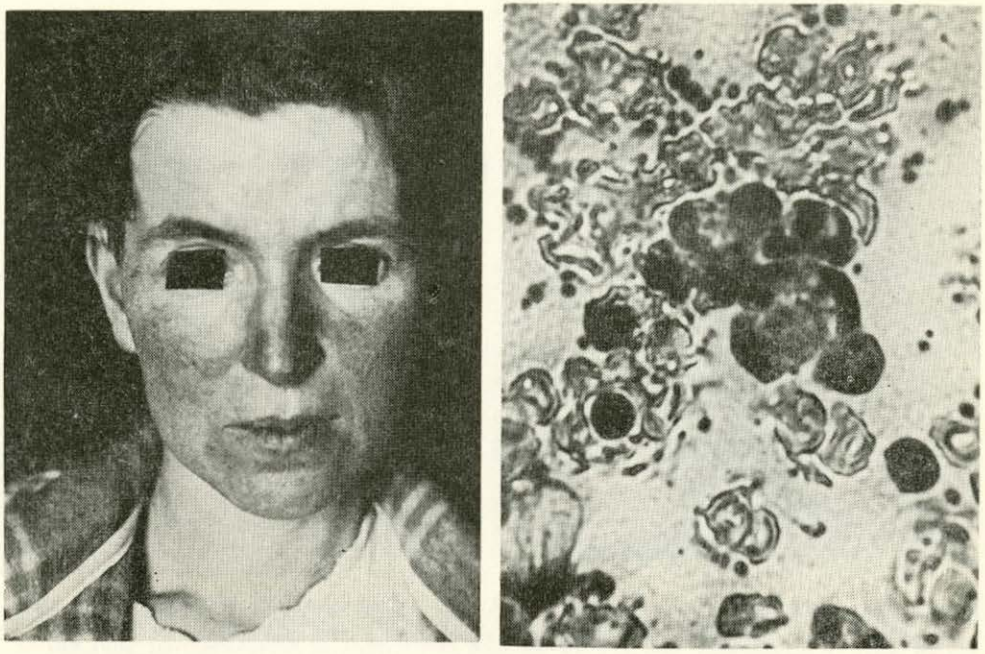

Figure 25.—Disseminated lupus erythematosus in a young woman. A. Characteristic butterfly rash on bridge of nose and cheeks. B. "L.E." cluster and polymorphonuclear cell containing mass of homogeneous material.

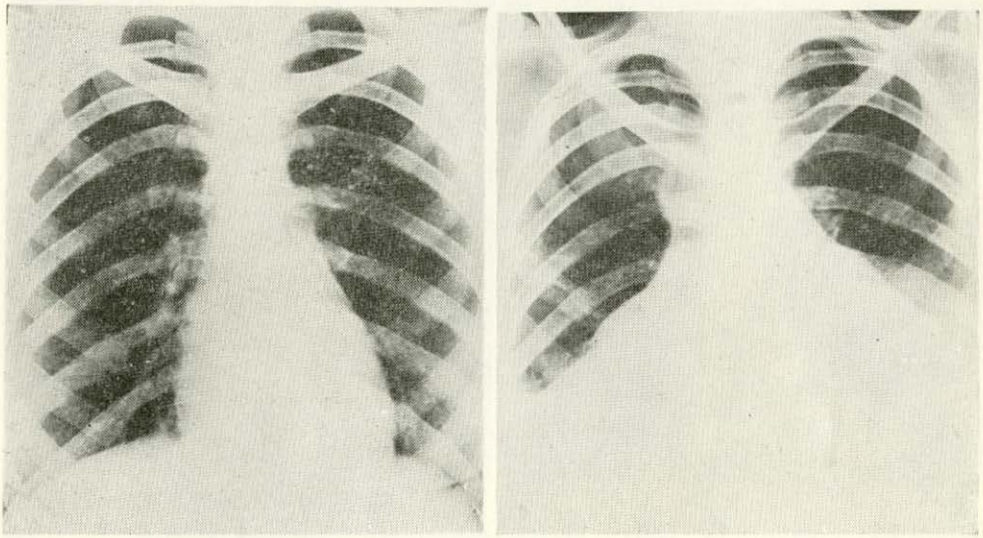

Figure 25.—(Cont'd) C. Chest x-ray shows no abnormalities. D. Five months later, fluid in both pleural cavities and pericardium; soft round infiltration in right upper lobe; linear, horizontal striations in right midlung. (Autopsy revealed fibrinous, gelatinous, exudate in both pleural cavities, also in pericardial sac). Edema and congestion of lung parenchyma; glomerular lesions of kidney with suggestive "wire-loop" appearance).

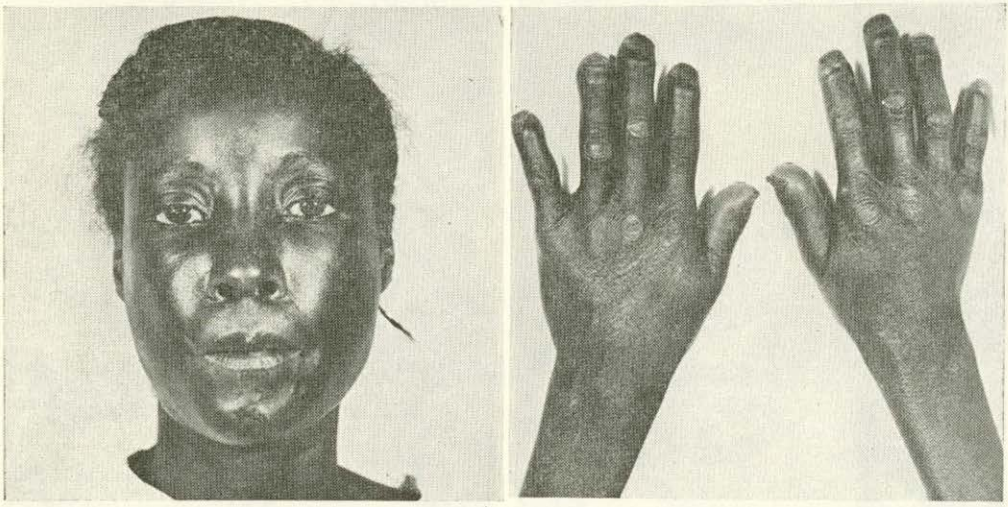

Figure 26.—Scleroderma in a woman of 30. A. Mask-like face; puckered lips; tight, smooth skin. B. Sclerodactylia with absence of distal phalanges.

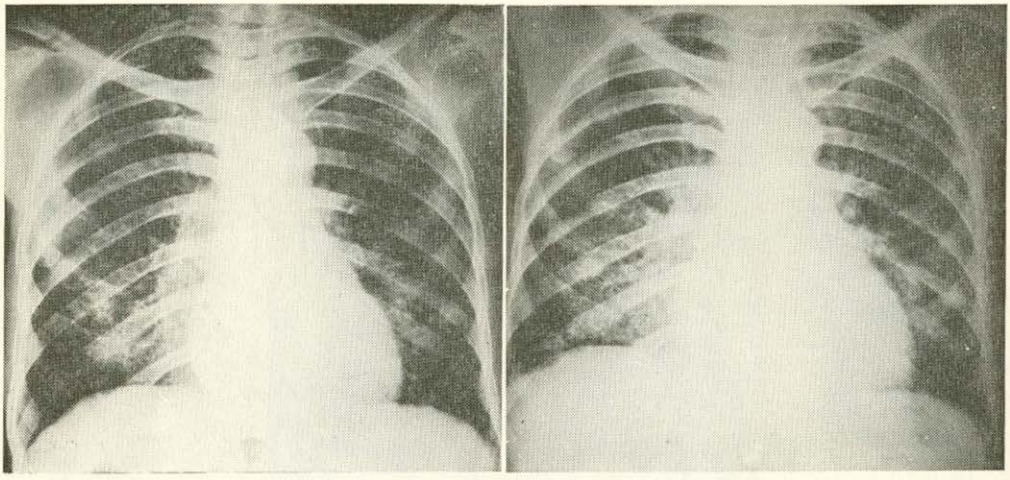

Figure 26.—(Cont'd) C. Diffuse interstitial infiltrations in both lungs, more marked in lower and inner portions. S. Increase in extent of infiltrations; heart enlarged. (Patient died of right heart failure). (E. H. Rubin, Diseases of the Chest. W. B. Saunders Co., 1947).

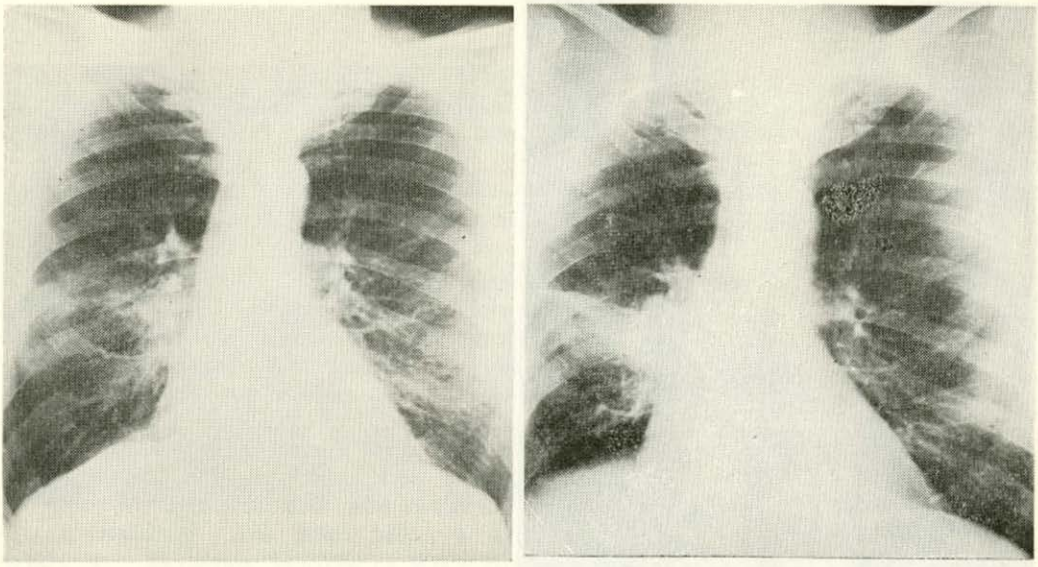

Figure 27.—Dermatomyositis in a man of 63 and coincident development of carcinoma of the lung (Kodachromes of face, chest and hands not reproducible). A. Irregular, faint infiltrations in right midlung region; increased hilar markings with calcified foci. B. Eighteen months later, marked increase in density in right lung; hyperillumination of right upper lung. (Exploratory thoracotomy revealed carcinoma of right lower lobe invading diaphragmatic pleura; giant bulla in upper lobe; tumor not resectable).

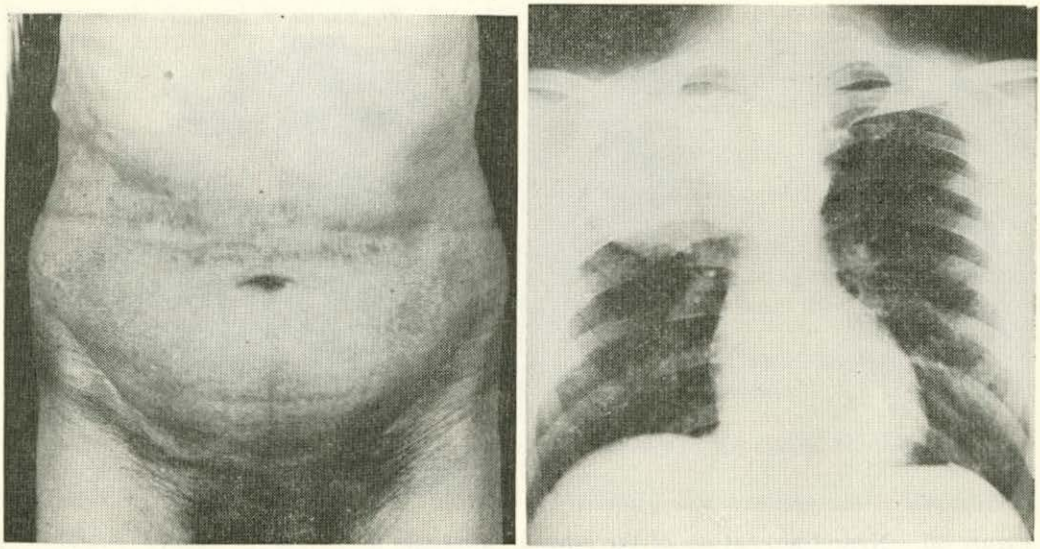

Figure 28.—Acanthosis nigricans in a man of 42. A. Darkly pigmented, ridged skin in both crural folds, also skin of abdomen. B. Large, spherical mass occupying entire right upper lobe. (Biopsy of right supraclavicular lymph node revealed squamous cell carcinoma.)

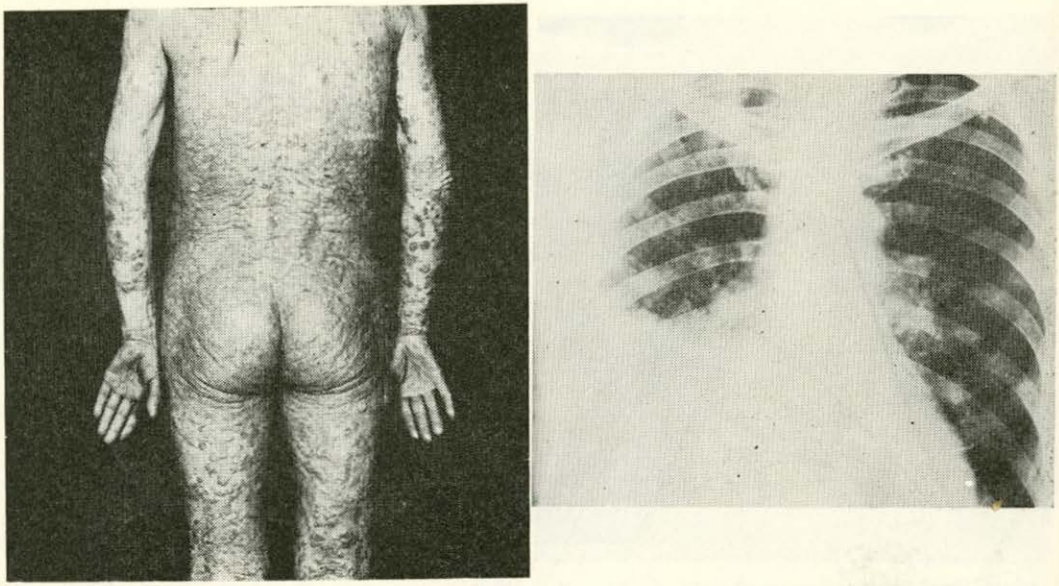

Figure 29.—Mycosis fungoides in a man of 59. A. Nodular and ulcerative lesions of skin of trunk, arms and legs. (Biopsy of skin revealed changes consistent with mycosis-fungoides). B. Chest x-ray reveals a large collection of fluid in the right pleural cavity; irregular scattered densities in both lungs.) Lungs showed numerous small, well demarcated nodules. Histologic examination revealed nests of tumor cells in lungs, skin and other organs).

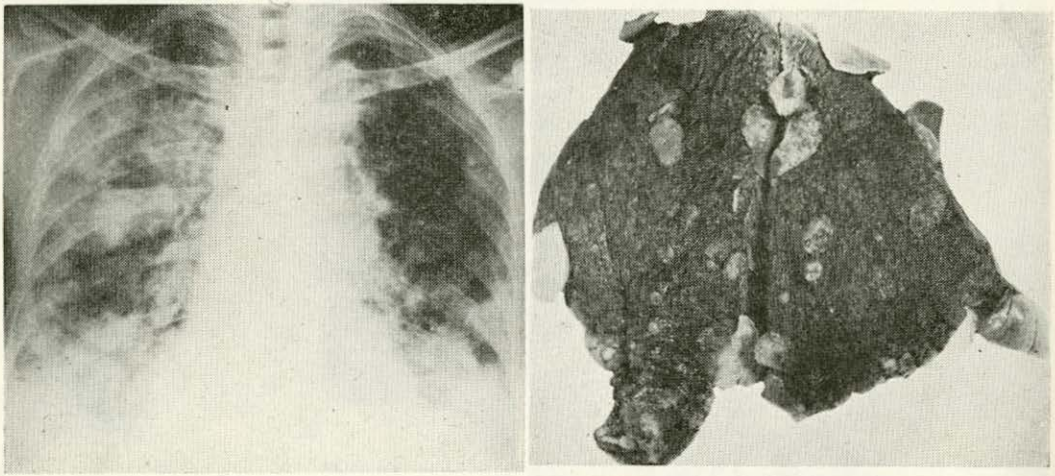

Figure 30.—Neurofibromatosis of the lungs in a woman of 57. A. Scattered round densities of uneven size in both lungs. (Fluid level in one mass following needle evacuation of contents). B. Gross appearance of specimen showing flat and ovoid projections on the surface of the lung. (On section, lungs revealed round nodules of uneven size scattered through parenchyma. Microscopic examination of nodule showed fibres and cells in palisade arrangement; also elongated nuclei with delicate fibrils; small cysts lined by endothelium). (E. H. Rubin and W. Aronson; Primary Neurofibroma of the Lung. Am. Rev. Tuberc., Vol. 41.)

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