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QUEEN'S MEDICAL QUARTERLY.

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BUSINESS MANAGER: W. T. CONNELL, M.D.

This number is issued under the supervision of Dr. D. E. Mundell.

Communications to be addressed to DR. W. T. CONNELL, Queen's University, Kingston.

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MEDICAL EXAMINATION FOR LIFE INSURANCE.

WHEN we consider that some 16,000,000 people in Canada and the United States carry insurance aggregating some $20,000,000,000 we can realize the importance of conscientious work on the part of the medical examiner for life insurance.

The American Association of Medical Examiners at its meeting in Portland, Oregon, July 10, '05, resolved that the need of instruction in life insurance examination should be urged on each medical college in the States. As a result of this resolution 80 colleges were communicated with, from whom there were received 48 replies.

Of the 48, six have regularly appointed chairs; in 20 lectures are delivered on life insurance examination, while of the remainder, nine are in favor of instituting a course on the subject. This proportion of favorable replies indicates that a need is felt for such instruction in the principles of proper examination for life insurance.

The young practitioner has been taught during his course in college to consider patients from a pathological standpoint

—to trace diseased processes—to study the abnormal. As an examiner for insurance he has to alter to some extent this point of view; he should not regard the applicant as a patient since his energies should be directed with the object of finding whether the person applying for insurance be normal rather than abnormal. Patients consulting a physician are only too willing to afford every facility to the latter to discover disease, but when they consult the medical examiner they are very anxious to be considered in perfect health, hence often, intentionally or otherwise, previous diseases are forgotten, bad habits concealed, present symptoms made light of.

Another thing that seriously affects insurance companies is the occasional carelessness of the medical examiner. While no more conscientious class of men as a rule can be found than the physician, yet when regular professional duties are demanding a large portion of his time it is conceivable that an applicant may be hurriedly examined with subsequent difficulty for the examiner to explain to the company that he had examined the lungs over the vest or outside the shirt, and hence did not detect a small cavity the existence of which the company may be able to prove by the regular attendant to have been present for some time previous to the examination. Perhaps the applicant dies a few months after admission from chronic Bright's or from diabetes, and the death claim certificate makes it plain that the applicant had suffered for years previously from either of these diseases. The only conclusion the company can come to in these premises is that the medical examiner was grossly negligent. The moral hazard must always be considered. The medical examiner should feel that he is the representative of the company for whom he is at the moment making the examination, that therefore he should consider would he accept the applicant if he, the examiner, were the one to lose the $1,000 in case of death of the applicant. Applicants who are turned down by a company and learn the cause are very apt when applying for other insurance to conceal the answers that led to the previous rejection, especially if the agent be unscrupulous,—fortunately exceedingly rare. I have known an applicant to use digitalis to show a fast pulse,—

to rush in to an examiner stating he was in a great hurry, hoping that no stethescope would be used (the same applicant died 12 months afterward from fibroid phthisis),—and even to bring a sample of urine in a small bottle in his pocket and stepping behind a screen, when asked to urinate, pour it from the bottle into the test tube provided (this applicant died two years afterwards from diabetes.) Thus we can appreciate the fact that the examiner should be constantly on his guard in making an examination for life insurance, for one such loss here and there means in the aggregate an important item for the company.

An examiner should never try to justify himself for any carelessness in making an examination on the ground that the fee he receives is inadequate for the blank required to be filled. It is true that a careful examination demands and should command a good fee, yet because an insufficient fee is paid does not excuse the signature of the examiner testifying that the above applicant is a first-class risk. The signing of the examination by the examiner recommending the applicant as an insurable risk should be as zealously guarded as the examiner's word would be. If the fee be thought inadequate, refuse to examine for that company rather than examine inadequately.

In conclusion I might say that in Queen's lectures are given on life insurance by two members of the Faculty, who are chief medical examiners for two prominent Assurance Associations.

ONTARIO MEDICAL ASSOCIATION.

THE annual meeting of the above Association was held in Toronto, May 27th, 28th and 29th with a record attendance of 275 members. Papers of great merit and dealing with a variety of subjects, medical and surgical were read and discussed. In addition to the purely scientific, the social aspect was made a prominent feature—a very pleasant time being spent at a smoking concert on the evening of the 28th and at a banquet in the King Edward on the following evening. Among the

speakers at the latter function being the Lieut. Governor of Ontario, Dr. Crile of Cleveland, and others prominent in the different professions

The Medical profession in Eastern Ontario were, numerically, very poorly represented. This is to be regretted as every physician should take an active part in some medical society since he cannot fail to give as well as to receive benefit in the reading and discussing of papers, while in addition there is a broadening influence derived from meeting other members of the profession. We would strongly urge the profession in Eastern Ontario to attend the next annual meeting of the Ontario Medical Association.

The Kingston members in attendance were Drs. Anglin, J. C. Connell, W. T. Connell, Hanley, Harriman, Mundell, Ryan and Third. The claims of Kingston as the place of meeting for 1908 were strongly urged by the above gentlemen, but as a mark of courtesy to the new president, Dr. Olmstead, Hamilton was selected.

The officers elected for the ensuing year are:

President—Ingersoll Olmstead, Hamilton
1st Vice Pres.—H. J. Hamilton, Toronto
2nd Vice Pres.—D. E. Mundell, Kingston
3rd Vice Pres.—C. E. Casgrain, Windsor
4th Vice Pres.—T. S. T. Smellie, Fort william
Treasurer—Frederick Fenton, Toronto
General Secretary—Charles P. Lusk, Toronto.
Asst. Secretary—Samuel Johnston, Toronto

A BI-SPECIALIST.

At the dinner held by the Ontario Medical Association this year, Dr.———, Governor of the ——— jail said, in replying to one of the toasts that he considered he should rank as a bacteriologist since he had been for a number of years a very close observer of *cell life*, and that in the institution with which he was connected there was plenty of *time* for such work, and further that as an obstetrician he could say without egotism and without fear of contradiction that he attends, each year, more cases of *confinement* than any other physician.

ONTARIO MEDICAL COUNCIL.

THE annual session of the Ontario Medical Council was held in the city of Kingston commencing on Tuesday, July 2nd, and continuing throughout the week. The Council is the legislative body of the profession in Ontario and often referred to as the medical parliament of Ontario. Its members —30 in number—are elected for a term of four years. Eight are representatives of the universities and medical schools, five are elected by the homœopathic practitioners as their representatives, and seventeen are elected by the general profession throughout the province—there being seventeen divisions or ridings in the province for this purpose.

Following is the personnel of the present Council:

1.—*Electoral Members.*

No. 1 Division—Dr. J. L. Bray, LL.D., Chatham.
" 2 " — " Cormack, St. Thomas.
" 3 " — " J. McArthur, London.
" 4 " — " J. A. Robertson, Stratford.
" 5 " — " Vardon, Galt.
" 6 " — " J. Henry, Orangeville.
" 7 " — " P. Stuart, Milton.
" 8 " — " S. H. Glasgow, Welland.
" 9 " — " R. J. Gibson, Sault Ste Marie.
" 10 " — " E. E. King, Toronto.
" 11 " — " Hart, Toronto.
" 12 " — " S. C. Hillier, Bowmanville.
" 13 " — " Bascom, Uxbridge.
" 14 " — " MacColl, Belleville.
" 15 " — " W. Spankie, Wolfe Island.
" 16 " — " J. W. Lane, Mallorytown.
" 17 " — " M. O. Klotz, Ottawa.

2.—*Collegiate Representatives.*

Dr. W. Button, Toronto University.
" Starr, Victoria "
" E. Ryan, Queen's "
" A. J. Johnson, Trinity "
" J. A. Temple, Trinity Medical School.

Dr. W. H. Moorhouse, Western University.
" Hon. M. Sullivan, Royal College.
" Sir James A. Grant, Ottawa University.

3.—*Homoeopathic Representatives.*

Dr. E. T. Adams, Toronto; Dr. E. A. P. Hardy, Toronto; Dr. Jarvis, Toronto; Dr. Luton, St. Thomas; Dr. G. Henderson, Strathroy.

The meetings were held in the County Council Chamber, Court House. The retiring president, Dr. W. H. Moorhouse, of London, addressed the Council briefly, referring to the work of the Council for the past year. The registrar, Hon. Dr. Pyne, then called on the Council to elect a president for the ensuing year. Dr. W. Spankie, of Wolfe Island, was the unanimous choice for president. He was duly elected and escorted to the chair.

The president, Dr. Spankie, then addressed the Council, thanking the members for the honor conferred upon him and extending to the Council a hearty welcome to the old limestone city.

Other officers were elected as follows:
Vice-President—Dr. P. Stuart, Milton.
Registrar—Dr. J. L. Bray, LL.D., Chatham.
Treasurer—Dr. H. W. Aikins, Toronto.
Counsel—Dr. H. S. Osler, Toronto.
Auditor—Dr. J. C. Patton, Toronto.
Stenographer—George Angus, Toronto.
Prosecutor—Charles Rose, Toronto.

The Council regrets the loss of its faithful registrar, Hon. Dr. Pyne, who held the position for 27 years, and who retired this year on account of the pressure of other duties.

Dr. J. L. Bray, of Chatham, was the unanimous choice of the Council to fill the position of Registrar. No other name was mentioned for the position. Dr. Bray has been the representative of Division No. 1 in the Medical Council for 27 years, has occupied every important office and knows the workings most thoroughly. We wish him success, comfort and long life in his new position. A pleasant feature of the session was

the address and presentation of a handsome cabinet of silver plate to Hon. Dr. Pyne. This was done by the members of the Council personally as a slight token of their respect for their faithful friend, associate and registrar. The Council will later on order a life-size oil painting of the honorable gentleman for their new building when completed in the city of Toronto.

The work of the Council is largely routine and the various committees are kept busy during the session, and their reports seldom come in for sharp criticism.

Fall Examination.

It is well for interested students to note that the date of the Fall examination, or supplemental as it is called, is earlier than in former years. It will now begin on the 3rd Tuesday of September. We believe this is better for both student and examiner.

Curriculum.

A special committee, being a sub-committee of the Education committee, has been appointed to take into consideration the whole curriculum and report any desired changes at next meeting of Council. We believe this has particular reference to the fifth year. Dr. E. Ryan is a member of this special committee.

Site and Building Committee.

The Council is at present without a permanent abode, and a special committee has been named to select a site for the new building, which is to be the executive headquarters of the profession in Ontario.

(Since adjournment we are informed that this committee has met and agreed unanimously to the purchase of a site on University Avenue, Toronto, and that a special meeting of the Council will be called in early autumn to ratify the same and to decide on the plans for the new building, and give the contract for the same.

CARDIO-VASCULAR DEGENERATION.

THE term "cardio-vascular degeneration" is apt to call to mind at once the disease arterio-sclerosis, or, as it is known, the "disease of old age", this being the only widespread affection of the vascular system having a definitely established place in medical nosology. It would circumscribe the meaning sought for in the employment of the title word if we should substitute the term arterio-sclerosis, as it is ordinarily employed to designate the sclerous processes which we encounter in the latter decades of life. This would exclude many of the chronic nutritive disturbances, with their secondary vascular reactions, which the writer has in mind. It may be claimed that all of the vascular degenerations resulting from disturbed metabolism partake of the pathologic essence of arterio-sclerosis, differences being questions of degree only. This as it may be, it nevertheless remains that the term "arterio-sclerosis", as conventionally understood, is much too specific in meaning to cover the wide range of vascular defects that come under clinical and pathologic observation. Until comparatively recent times the recognition of morbid processes in their true light was considerably hampered by the commonly prevalent notion that disease usually attacks one organ and confines itself more or less closely to a focus comprised within the organ involved and its immediate dependencies, without a just appreciation of the fact that derangement of function or structure seldom confines itself within snch narrow limits, but may be manifest in widely related parts and distant organs. This is essentially the characteristic of the insidious vascular degenerations and tissue decay that result from the chronic intoxications. No better example could be cited to illustrate this fact than chronic Bright's disease. The utter inadequacy of a diagnosis of Bright's disease in a fatal case viewed on the autopsy table to describe the widespread morbid changes must be evident to anyone considering the matter. Such extensive and apparently equally advanced disease exists at all points of the organism, that it seems as if the body tissues had all simultaneously succumbed to some unsupportable universal insult. Judging from the morbid anatomy alone, who can say in such a case that because the kidneys are

diseased that the vascular, cardiac, liver, lung and other changes are all secondary, or that the dropsy was renal in origin, in view of the multitude of profoundly advanced lesions elsewhere? When we study the distribution and character of the tissue changes present in such a case and compare them with the dystrophic phenomena encountered in the tissues and organs as result of the chronic intoxications generally, we find them to differ only in degree and perhaps in certain relative ways, such as local distribution, according as the toxins expend their irritating powers more on one orgar than another. The morbid histology is found to differ merely in degree and minor featural ways in a wide range of chronic tissue degenerations. Among these we may enumerate chronic nephritis, arterio-sclerosis, chronic lead and other metallic poisoning, chronic alcoholism, gout, syphilis, diabetes, and the chronic intoxications generally. The secret of this similarity is a common etiology, i.e., toxemia, operating according to a common modus operandi, with a similar sequence in the order with which the various tissues react to the morbid irritation. The net outcome of this toxic action upon the body tissues—which may be those of a being young in years—is to produce all the changes which under normal circumstances are found only in old age. This fact stands prominently forth, that chronic tissue degenerations are essentially tissue decay, carrying the individual rapidly and prematurely into the period of senility. It is by no means solely the number of years a human being has lived that makes him old. The period at which the body begins to show the degeneration of age differs greatly, depending perhaps to some extent on inherited tissue disposition, but more upon the insults to which the tissues have been subjected from dissipation, excesses, chronic infections and nutritive disturbances.

As a consequence of such factors resulting from man's environment and mode of living, we find him suffering during middle or comparatively early life from the tissue degenerations which normally belong only to the period of age, and he is liable to die at any age, even in youth, of a disease pathologically the same as senile decay.

The primary, and throughout the course the main, feature

common to all the chronic widespread tissue degenerations is the vascular changes. As Balfour puts it, "The arterial system, which leads the van in the development of the body, is also that upon which the finger of decay is earliest laid." Our understanding of the commanding importance of arteritis in the tissue decay of nutritive disorders had its beginning in the researches of Gull and Sutton, who fixed the connection between arterio-capillary fibrosis and the profound cardio-vascular alterations of Bright's disease. Numerous subsequent researches have confirmed and extended these observations, and the role of arteritis in the production of cardio-vascular degeneration is now generally acknowledged. The cause of the arteritis is contact of the surfaces of the vessels with a vitiated blood, and it is no over-statement to say that it is now accepted that any hematic toxemia, no matter what the circulating toxin be, is capable of setting up nutritive changes in the vessel walls, if long enough continued. The secondary effect of this vascular sclerosis is to produce atrophic changes in the various organs. This is easily understood when we consider that the progressive narrowing of the vascular channels as their walls increase in thickness and lose in elasticity diminishes the amount of blood distributed throughout the tissues, and as a consequence of this interference with the nutritive supply fibrosis and atrophy follow.

The foregoing considerations are reviewed in order to point the moral that from the absolute point of view, in order to estimate the degree of wearing out of the coefficient of vital energy, which is but another way of putting the nearness to death, we must take less into account the years of the individual than the state of his circulation. After all, as Cazalis has written, "One is of the age of his arteries". Such a statement hardly needs support, although in the light of recent blood pressure observations it might be slightly modified, since we now understand that stiff arteries do not prevent the attainment of a good age, provided they are not subjected to the strain of increased blood pressure. We can all draw upon our own experience for examples of the young old-person, and the old young-individual. From my own recent observation I can

recall a lady of 98, who until shortly before her death preserved the smooth, soft skin of middle life—a soft, compressible artery and unimpaired intelligence. The very antithesis is represented by a young woman at present under observation, who, although only 28 years of age, has the fibrous stiff vessel and enlarged heart of old age.

A still more striking example is the case of a child of 8 years, the unfortunate victim of bad hygiene and underfeeding, who has an easily recognizable arterio-sclerosis.

In looking through the 1906 report of the Illinois State Board of Health, which came to me a few days ago, I was impressed with the large place occupied by cardio-vascular diseases in the mortality record of the year. For the purpose in hand we may include the deaths due to heart diseases, Bright's disease and apoplexy as together constituting cardio-vascular mortality. On this basis we find the mortality to be 175·5 per 100,000 of population for the entire State, and for Chicago alone, 227 per 100,000. Sixteen per cent. of all deaths were due to these causes. The true significance of these figures stands forth when they are compared with the mortality resulting from tuberculosis and pneumonia, ordinarily considered the two most lethal factors. The ratio for tuberculosis was 129·5 and for pneumonia 110·4 per 100,000, as against 175·5 for combined cardio-vascular diseases. The mortality percentage for tuberculosis was 12 per cent., and for pneumonia 10 per cent., as against 16 per cent. for cardio-vascular diseases. It is, of course, appreciated that these figures are rough and approximate, but they suffice to draw attention somewhat more forcibly to the importance of cardio-vascular degenerations as a mortal factor.

For the present purpose it is unnecessary to discuss in detail the factors which are recognized as important in determining vascular degenerative changes. When it is said that all persistent disturbances of nutrition and chronic toxemias possess this power, the ground covered will be readily appreciated. One matter of some importance that may with advantage be mentioned is the influence of the infections on cardio-vascular welfare. The point I would accent is not the influence of

syphilis, tuberculosis and other chronic infections, for this is familiar ground, but the power of acute infections—those of short duration—to produce and perpetuate serious cardio-vascular mischief. This is a comparatively new subject for investigation, but already we are in a position to affirm, chiefly as the result of the work of Thayer and his associates, that the percentage of arterio-sclerosis and nutritive cardiac defects is higher in those presenting a history of severe infectious diseases than among those in which this history is absent. Rheumatism appears to be the acute infection in which the percentage of arterio-sclerosis is highest, and next to rheumatism typhoid fever. As a consequence of these facts some stress is to be laid upon the pathogenic role of a past acute infection which was severe though temporary. How often it is our experience to have a patient who is a chronic invalid, or irreclaimable neurotic, date all his troubles from an attack of the "grippe", and one may recall individuals who have aged greatly after simple infections. It is not rare to see in children a simple measles or scarlet fever give rise to a nutritive deviation which is permanent and progressive. We may recall also instances where persons after a typhoid or other acute infection, perhaps a carbuncle, began suddenly to gain in weight, and in the course of a year or two put on twenty or thirty pounds or more. This change is difficult to explain, but the fact that it is usually marked by a diminution of vigor and the power to withstand fatigue and resist intercurrent acute infections suggests the explanation that it results from an interference with normal tissue exchange.

An explanation of these clinical observations is furnished by the investigations of Wiesel and of Simnitsky. These observers found that degenerative changes in the peripheral arterioles were constantly induced by the acute infections, and that if severe, these changes were liable to result in permanent arterio-sclerosis. The results of vascular degeneration have been hinted at in the foregoing discussion of its bearing on vital resistance and longevity. As every integral part of the organism depends on the blood stream to furnish it with its nutritive supply and bear away the products of disintegration,

so every organ and tissue will suffer in direct proportion as its vascular channels are diseased. The fibroid structural alterations which ensue in most of the body tissue give no hint of their presence, as a rule, except in loss of weight, shrinkage in bulk and diminution in vital activity. Those organs which are classed as end-organs, owing to the terminal character of their arterial supply, are naturally the most sensitive to any interference with the circulation, and manifest structural and functional disturbance earlier than becomes apparent elsewhere. These organs are the brain, kidneys, eye and myocardium, and they furnish us with most of our clinical data. Any disturbance of brain function must be looked upon as especially significant, owing to the extreme sensitiveness of the cerebral tissue to local malnutrition. Dizziness, tinnitus, insomia, headaches, transient aphasia, failure of mental power, are all extremely significant symptoms, especially if occurring in one otherwise apparently vigorous, or if associated with occasional spontaneous epitaxis. To a certain extent we have access to the cerebral arterial circuit for purposes of examination, via the fundus oculi. The ophthalmoscope furnishes us with an invaluable means of making early diagnosis of obscure arterial disease. I can subscribe my own great personal obligation to the ophthalmoscope in the solution of many a puzzling clinical problem. With even ordinary skill in the use of this much neglected instrument, one can make out alterations in the caliber and rigidity of the retinal vessels, degenerative choroidal and retinal markings, or hemorrhagic extravasations, which furnish indubitable proof of vascular degeneration.

The kidneys of arterio-sclerosis show constant changes. There is a gradual loss of renal epithelium, and in this they simulate interstitial nephritis or contracted kidney. Care is necessary here to avoid a mistake in diagnosis, for the essential features of chronic nephritis are absent—function not being greatly interfered with. Casts are frequent in the urine in arterio-sclerosis, and traces of albumin may be found, but the polyuria, low specific gravity and reduced nitrogen output of true nephritis will be lacking. The urinary diagnosis must be made by quantitative rather than qualitative analysis.

Arterio-sclerotic renal atrophy and chronic interstitial nephritis are two essentially different things, and many errors of diagnosis are made by confusing them. It is true, however, that in any case of arterio-sclerosis the degeneration of one vital organ may outstrip that of the rest of the body, resulting in an active focal process which, if it be in the kidney, may reproduce in every essential the clinical picture of chronic interstitial nephritis.

The most important and constant of all the secondary effects of widespread arterial disease are the changes in the heart. Every case of arterial degeneration is accompanied by certain cardiac effects—comprising ventricular hypertrophy, with subsequent degeneration of the heart muscle.

Charcot was the first, I believe, to point out that the heart was the one organ which did not atrophy in old age, but hypertrophied. The factors which continue to bring about this result are part mechanical and part nutritional. The gradually advancing fibrotic changes in the arterial walls must rob the heart more and more as they progress of the co-operation which that organ receives from the peripheral field in the maintenance of a normal circulatory flow. The heart is compelled consequently to assume the extra residuum of work forced upon it by the insufficiency of the arteries. The heart hypertrophies to meet this demand, and the degree of enlargement will be in direct ratio to the embarrassment in the peripheral field. Fortunately, this end is facilitated by the very cause that brings it about, for increase in peripheral resistance results in an elevation of aortic blood pressure, and this in turn raises pressure in the coronary arteries, and thereby favors increased nutritive activity in the myocardium.

I would not be understood as implying by these statements that every case of arterial disease is marked by an actively increased blood pressure. A slight elevation of aortic pressure there undoubtedly is in all cases where there is loss of arterial elasticity. This is sufficiently apparent from the fact that as age advances the average normal systolic blood pressure gradually rises. Still a positive arterial hypertension is far from being the rule in arterio-sclerosis. In a recent report by

the writer on the subject of blood pressure in arterio-sclerosis (Journal American Medical Association, April 13, 1907,) the observations presented showed that only 53 per cent. of the cases investigated displayed a systolic pressure persistently above the normal limit, and only 20 per cent. of the series showed a blood pressure which could be called significant—a positive hypertension. I would again emphasize the point brought out at that time that because the palpable vessels are hard and incompressible from sclerosis, it does not necessarily follow that the blood pressure is high. Indeed, the high pressure pulse is not a calcified "pipe-stem" vessel, but a "leathery", fibrous one. When calcification is an early and prominent feature of the superficial vessels, the pressure is usually low. This type of case, in addition to the hard and nodular artery, displays as a rule most of the physical and mental stigmata of senility; the individual is usually spare and dyspeptic, has perhaps an arcus senilis, and can be found in numbers in every old peoples' home and asylum.

The high blood pressure case is frequently the clinical antithesis of this. The arteries are fibrous and tense rather than hard; the pulse is full, and the pulse wave sustained under the finger. The stigmata of age may be lacking. The superficial fat is well retained, and the color may be high. It is remarked that he looks "apoplectic", and so indeed he is, as it is just such types that develop cerebral complications. The high pressure in the cerebral vessels may for a long period conduce to a sense of physical and mental well-being, and such an individual is the last person to confess himself seriously ill. If the blood pressure is taken, it is found to be 200 m.m. or higher. What is the factor which determines high blood pressure in one case of arterial disease and its absence in another is a pertinent question. To the best of present information the local distribution of the vascular changes is the underlying factor. In the high pressure case it is probable that there is severe involvement of the vessels of the splanchnic area or of the aorta above the celiac axis. In low pressure cases it is altogether likely that the degenerative changes are mainly in the superficial vessels. Diagnostic criteria for the differentia-

tion of the two types of cases are unsatisfactory, the only means at present available being blood pressure readings with the sphygmomanometer. This instrument is indispensable in estimating the future and termination of any given case of cardio-vascular disease. If the factor of high blood pressure is absent, there is nothing to prevent the sclerotic individual from filling out his allotted span of life, provided he escape acute infections, which he is badly equipped to resist, and always, of course, providing he live within the limits of his gradually declining organic capacity. When death eventually comes to such patients, it is usually in the form of an atrophy, such as cerebral softening.

The advent of high blood pressure in a case of cardio-vascular disease opens up an entire chapter of possible accidents. The heart is called upon for increased compensation, and the arteries undergo a similar hypermyotrophy, and so long as compensation remains adequate all may go well. It is remarkable how admirably, and for what surprising periods, nature maintains the circulatory balance under these trying circumstances. Sooner or later the end will come, usually in one of three forms—apoplexy, cardiac failure, or uremia.

In closing these general remarks on vascular degeneration, certain facts as to prognosis may be accented. The individual advanced in life who presents evidence of arterio-sclerosis need not necessarily be regarded as having his natural longevity greatly restricted thereby, provided his habits and hygiene be regulated to harmonize with his increasing physical limitations. The involutional or senile type of arterial degeneration is very gradual in its evolution, and less than other forms is liable to be associated with the complicating element of high blood pressure.

When evidences of cardio-vascular involvement appear during middle life, and especially if they appear in individuals under forty years of age, the outlook is quite otherwise. Under these circumstances the individual's future may certainly be regarded as seriously prejudiced. The arterial and cardiac alterations which antedate the later and normally sclerotic periods of life are much more active in type, produced, as a

rule, by some more or less definite toxemia. They are more apt to be associated with hypertension, and to be complicated by some definite organ dystrophy, such as chronic nephritis, myocarditis, etc.

ARTHUR R. ELLIOTT, M.D., Chicago.

A FIRST EFFORT BY A QUEENSMAN.

NEITHER by accident nor by design is this a scientific paper, but simply a truthful account of an initial clinical experience.

Not so many years ago as to consign the time to a place in ancient history a patient came to see us, as patients occasionally did in those days—a poor little speck of humanity with a Wells' *facies* and a large abdomen. An examination quite decided to our mind the fact that she was the bearer of an ovarian neoplasm, and a careful physical exploration seemed to reveal its origin in the left pelvis, where the pedicle was located. The nature of our diagnosis was communicated to the patient, followed by speedy interrogation on her part as to "what we were going to do about it?" This rather startled us, as at that time it was not our good fortune to have witnessed the performance of an ovariotomy, although it had been our misfortune to observe slow death under repeated tappings on the part of a good old preceptor who did his duty as he understood it. We did not enjoy a sense of delightful robustness when an answer was requested. Our attempts at evading radical action were frustrated by the patient's insistent demands for relief at our hands, and we heartily wished for a little of the

confidence in ourself which she felt in our ability to engage in what then seemed to us an undertaking of enormous magnitude. We must confess that for years our most frequent dreams were dreams of being an ovariotomist, if but for once, but when the opportunity to gratify our long-cherished ambition presented we hunted the ground about, the horizon around, and almost the heavens above, for an avenue of retreat. Turn the way we would or did, escape was cut off by this little woman of pitiful face and entreating voice, refusing to allow us to find the vanishing point which we so earnestly sought. She was as industrious in forcing the issue as were we in endeavoring to evade the point until we realized that

> "He is a fool who thinks by force or skill
> To change the current of a woman's will".

Woman's strongest weapon is often her tears; she wept, we surrendered, and at length consented to make her the possible victim of our maiden effort, our capitulation being followed by another night, the prominent features of whose repose was fright and nightmare, not unmixed with a troubled conscience. Then, smaller hospitals with their virtues and faults, did not abound as now, and men who were willing, with or without reason and provocation, to open a belly were not to be counted by the score, so it became necessary to find suitable quarters for the patient and to secure an assistant or two, or many more, whose presence and help might fortify us in our sense of progressive enfeeblement. The quarters were found a dining-room, well lighted and capacious, an adjoining kitchen with a well-appointed range, and a treasure in the owner, a competent, intelligent woman who many times thereafter proved herself worthy of my confidence in her as a nurse. Across the way was another good soul, a model housewife, whose house was tin-roofed, whose cistern was cement-lined, who gave us of all the clear water the willing heavens poured into her reservoir. One of our largest single orders was soon in the hands of an instrument dealer, who willingly supplied us with inferior little Pean hemostats at $27 a dozen, and other items of our *armamentarium chirurgicum* at equally reasonable and ruinous rates, including braided silk of tensile strength

adapted to the hauling of a cart down by gradations to the thin strand of spider-web size. The stock of cheese-cloth in the village shops was depleted almost to famine limits, and our office shelves soon groaned under the weight of accumulated bichloride of mercury in bottled powder and immense containers of "mother solution", carbolic acid, iodoform, chloroform and ether. Marine sponges were deemed indispensable, elephant's ear and round, and soon a bagful was charged to us in our current account with the druggist. The sponges were a source of great anxiety to us, for we were conscious of the fact that Lister had some time since made a few statements to which it was well to listen and to pay heed. They were well pounded, they were soaked in dilute hydrochloric acid solution, they were well washed, they were exposed to the solution of potassium permanganate and one of oxalic acid in alternation, washed again and stored in five per cent. carbolic lotion. Yet our confidence in their immaculate cleanliness was not complete, so we hung them for a day in the water flowing from the flume at the village carding mill. Deciding to go fishing, we could not leave our beloved sponges behind, so we took them with us in a clean bag and continued the detergent process by dragging them at the stern of the boat from "sunny morn till dewy eve." We have never repeated this latter laborious item of the method of preparation, for the experience taught us that it is not altogether satisfactory. The second preparation of the sponges began at the beginning and ended with storage in one in twenty carbolic lotion. Our nurse was equally busy as long as her sister's generous cistern held out. She had oceans of water three times boiled and stored in containers which had been boiled before. Yards of cheese cloth had been cut into 36 in. squares, folded, boiled in soda solution to rid it of starch and boiled again to extract the soda before storing in 5 per cent. carbolic solution. Such a system of housecleaning had never been witnessed, with the story of the details of which we need worry no reader who has exercised sufficient patience to proceed thus for, beyond saying that the principal component of the circumambient atmosphere seemed to be carbolic acid. The quick-witted and nimble-fingered nurse had tables, stands,

chairs, floors, woodwork, ceiling, windowpanes, as clean as rivers of hot soapy water, scrubbing brush and floods of that same 1 in 20 could render them, pitchers, basins, trays &c. were made to conform to conditions to suspect which to be the source of possible contamination would be a crime. We fear our patient in the meantime was being submitted to measures no less thorough, if, indeed, not violent, for our new found nurse manifested a degree of zeal in strenuously following instructions which could not but command admiration, a repetition of which on more than one occasion since we have longed to behold. Other matters than supervision of the immediate details of preparation occupied our attention, for we needed help, and keenly felt the need as well. All the professional friends we asked kindly consented to come and lend us their aid. We shall not "name names," for all but half a dozen, or more, of our assistants are still living, and ere this they have probably grown serious minded—yet we cannot forget the vision of Mert G. with reddened forearms and arms up to his shoulders in a washtub full of marine sponges soaking in 1 in 20, and equally vivid is the memory of the expression of supreme satisfaction on the face of the imperturbable Frank K. as he eagerly looked forward to the "carnival of blood" and joyously comtemplated the little mass of quivering jelly opposite him in the shape of our agitated self. One dear old colleague, since gone to his reward, and ever of blessed memory, assured me "fools rush in where angels fear to tread," but he proved not unfaithful to my glorious confidence in his goodness. As Geo. J. is still a familiar figure in the same capacity, I shall mention his name but to say he no longer carries his ether in a 2 gallon demijohn nor uses a gauze stuffed lamp chimney as an inhaler.

I have alluded but most lightly to the trying times we had in getting ready for this job, for more would be most wearisome and as free from profit as pregnant with tediousness. Suffice it to say, from experience with a few compound fractures, amputations, etc., we had become a firm believer in *antisepsis*, and country doctors' offices and farmers' houses were not equipped as are the numerous hospitals in these days of *asepsis*.

All things come to an end, and so did that long, sleepless

night which ended with the morning when we were to do and the patient perhaps to die. The fearful day had certainly come; of that there could be no doubt, for had we not counted all the stars of the nocturnal sky, beheld the first daystreak from on high, and watched the growing dawn from pearling gray to crimson blush? Was its only event to be an Austerlitz or a Waterloo?

We assembled, coming one at a time, two at a time, several at once. until we were nearly all present, the others coming during the course of the day. In spotless garments we made ourselves mechanically, chemically, antiseptically clean to the best of our knowledge and comprehension of the manner of so doing, nor did we spare the patient's abdomen more than we did our own tingling hands, forearms and arms. A vast array of instruments had been immersed in 1 in 20 hours before, great hanks of silk had been steeping in the same solution for days, stacks of antiseptic gauze were on every hand, and a score of bowls contained antiseptic lotion for hands and towels. Finally all the white-clad gladiators were in the ring with weapons drawn. In due time the patient was snoring in ether sleep, and there was no escape for the most thoroughly frightened individual who ever officiated at the operating table. Again sparing details, we record the fact that the *linea alba*, the grand object of our search, was as elusive as the once famous Aguinaldo, but eventually the abdomen was open. The presence of a large intra-abdominal mass was easily demonstrated before, but what did our incision reveal? Something was there, but its physical characters did not answer to the description of the smooth, shining wall of the cyst we had read about for the hundredth time and more during the past week. We regretted our presence. Our diagnosis, after careful study of the case, seemed beyond doubt, but we were confronted by things not quite as we had expected to find them. We reconsidered our diagnosis for a moment, or for an age, we we have never been just certain which, and there seemed no recourse but to stand by our tremulous opinion. With the thrust of desperation we plunged the trocar into what had become the presenting monster and were dismayed to find noth-

ing in the receptacle at the end of the rubber tubing with which the instrument was armed. With a sense of terror and horripilation the thought came that we had but partially punctured the wall of a pregnant womb. Shades of McDowell, Atles and Wells! we had read up ovariotomy, but of Cæsarean section or hysterectomy we knew nothing. The patient was in deep ether narcosis, but neither she nor the monster of which she was the hostess seemed a stationary object, nor were we certain of our own relationship to the moving people and things about us. We withdrew the trocar and plunged a finger its length into the track; we demonstrated neither placenta, bag of waters, foetus or cavity. We recovered somewhat as it occurred to us that it would be well to look for the uterus; we found it innocent of impregnation, and just at that juncture it looked to us as a monument of virtue. We then recalled the fact that a rectal examination had seemed to enable us to locate a pedicle in the left pelvis, and investigation proved this to be the case. Now the situation was not having so decided a sudorific effect, and in the dim distance we beheld the ghost of returning self-confidence, for whatever the monster was we had at least made a diagnosis of a *pedicle*, and more, too, we had positively demonstrated the correctness of our opinion to our professional associates, whose mirthful countenances cast no jolly shadows on our troubled face. They were bearing our tribulation with more fortitude and resignation than we could possibly command. Another dry tapping and the situation cleared at once. We were dealing with an ovarian fibroid occupying the whole abdominal cavity. Delivery through our present incision was a mechanical impossibility, and *morcellement* we dared not think of, so in due time our poor patient was open from ensiform cartilage to symphisis pubis. The problem seemed on the eve of solution when the neoplasm was found to be adherent to the ascending colon. In the effort at separation the gut proved the weaker of the two, and with no pleasure we beheld a great rent in the hollow viscus. We were then not sorry we had expended a considerable sum in the purchase of many sizes of silk, that our supply of needles embraced several numbers, and that we

had read of double rows of Lembert sutures. We did not lose sight of the importance of having the beginning and the end of the suture employed in mending the bowel extend beyond the respective angles of the wound. The rent evidently healed without leakage. After release from the bondage of many other adhesions our muscular first assistant soon had the tumor outside the abdominal cavity, the pedicle was ligated and divided, and 30 pounds of trouble found repose in a tub under the table. An assistant, notwithstanding the frequent demands on his supply during the day, still had 75 or 100 marine sponges in his tub of 1 in 20, and with them we were enabled to do a fairly satisfactory toilet of the peritoneum. It was deemed wise to take a last look at the pedicle; it was bleeding as freely as an enfeebled heart could pump blood into it, but a second ligature secured perfect hemostasis, at the same time revealing to us the fact that under certain circumstances a reasonably fine strand holds better than a rope. During the afternoon our assistant at the tub succeeded in recovering his collection of marine sponges and positively assured us the count before and after coincided. Nothing since has occurred to lead us to believe he did not tell the truth. After a time the incision was closed with interrupted through-and-through sutures of silkworm gut and silk, our supply of the former not being equal to the occasion. Then the motto was, "When in doubt drain." We had been assailed by a thousand doubts and we drained; perhaps it was our awkward placing of the drainage, perhaps it was the patient's good fortune, maybe it was both, but the tube was expelled into the dressings before it had accomplished any harm. A mountain of 1 in 20 carbolated gauze, surmounted by a hillock of absorbent cotton, secured by a binder, constituted the dressing. The patient, when returned to bed, weighed 10 lbs. more than tumor removed. Her post-operative experience was that of the stereotyped "uneventful recovery". At the end of six months she had regained her health and 100 lbs. in weight.

It was this patient's happy experience to recover. Had the bloody encounter proven our Waterloo perhaps a few more would be dead of hopeless struggle with progressive disease,

but alopecia and cavities would be less pronounced in the morning reflection in our mirror as we strive to make the best disposition of the remnant left.

C. M. B. CORNELL.

TREATMENT OF FRACTURES OF THE SKULL.

THE general treatment of a fractured vault is to treat the shock and collapse in the usual manner and to watch out for reaction. When that is established the head should be elevated and an ice cap applied, with heat to the body surface and free purgation. The object of this treatment is to lessen the intracranial vascular pressure. If the case be one of a punctured fracture the trephine should unquestionably be used and at as early a period as possible after reaction has been established. If it be a fissured fracture and no subsequent symptoms develop operative interference will be unnecessary. If a depressed fracture of moderate character and without any special symptoms of brain disturbance the usual method is to treat it expectantly. When, however, it is remembered that even moderate depression of the outer table means in all likelihood more or less extensive comminution of the inner table one is justified in subjecting these cases also to operation. The mortality of the operation is so low, and the possible serious consequences so evident, that it would seem advisable to lay down a general rule to the effect that depression, no matter of what degree, calls for operation.

Rawling states that "If many of these cases (i.e., those in which injury to the inner table is considered doubtful) be followed up after discharge from the hospital, a large percentage develop some of the remote effects of head injuries, viz.,

chronic headache, irritability, Jacksonian epilepsy, &c". The mortality from the operation itself has improved from 50 % before the days of asepsis to 2 or 3 % at present, and though one hesitates to interfere in a case of very slight depression without immediate head symptoms, there can be no question but that it would be ultimately in the best interests of the greater number of patients if operation were adopted as a matter of routine in all cases of depression, in the adult at least, with or without associated cerebral symptoms.

A depressed fracture of marked degree or a comminuted one require of necessity operative interference for the purpose of elevating depressed or of removing detached portions of bone. When parts of the bone are removed aseptic gold foil should be inserted between the sharp edges of the bone and the dura mater and between the dura and the brain, to limit possible adhesion between these structures, especially if hernia cerebri be likely to follow.

One author recently suggested in cases of injury to the parietal region the rather ingenious idea of everting the temporal muscle covered by its deep tendinous insertion and suturing the edge thereof to the dura mater in the wound to limit adhesions.

Intracranial hemorrhage.—Murray, in a paper read before the New York Surgical Society, April, 1906, on "Early operation in traumatic intracranial hemorrhage," stated that the object of his paper was to suggest a more frequent resort to exploration of the skull in the hope of saving cases which otherwise would end fatally. He further said that "while recovery is possible under expectant treatment, many more die for want of operation". In his opinion the suspicion of existing cerebral contusion is not a sufficient valid reason for desisting from operation. Rather, he considers that removal of a clot, whether it be epi or subdural, will improve the circulation and exert therefore a beneficial influence on the accompanying contusion.

In injuries to the head some cases leave no reasonable doubt that intracranial hemorrhage is present, but after reaction the symptoms gradually improve, and in these instances

operation may not be necessary but when the characteristic picture is clear and distinct; when after the so-called "lucid" interval gradually deepening unconsciousness results, associated with the other symptoms of compression operative interference is clearly and urgently indicated. Localized twitchings or paralyses, bruising of the soft parts, or the history of the injury itself, will more or less act as guides in the selection of the point of operation.

Bowen reported (Guy's hospital reports) 72 cases, out of which number 52 were operated on, with 28 recoveries, and of the 20 non-operated cases, in 10 the cause of death was found to be due solely to compression from hæmorrhage.

Weismann collected 257 cases. 110 were operated on, with a mortality of 27 %, while in the 147 not operated on, the mortality was 88 %.

Fracture of base differs from fracture of the vault in two important particulars, (1) the greater danger of injury to the delicate basal structures, viz., the nerves, the blood sinuses, and the important cerebral centres, and (2) the fact that basal fractures are in the majority of cases compound. This latter point is important from a clinical standpoint, since it indicates the necessity of as thorough asepsis as possible of the cavities communicating with the basal fracture, viz., the nostrils, the ear and the pharynx. Hence in addition to the general treatment of fractures referred to above, it is desirable that these cavities be freed from organisms as much as possible by means of antiseptic sprays, douches, dusting powders, &c. In fractures of the posterior fossa it has been suggested to trephine the occipital bone low down since death in these cases is due to compression of the sensitive centres in the floor of the 4th ventricle.

Fractures of the Skull in Children.

The elasticity of the bones of the skull in the child, the absence of diploe, and the presence of fibrous tissue between the individual bones limit the occurrence of fracture of the skull in childhood. As to intracranial hemorrhage, the adhesion of the dura mater to the skull lessens the pressure effects of epi-

dural, while a comparatively slight injury leads readily to subdural hemorrhage because of the delicate walls of the blood vessels of the child. I make it a rule to advise the mother to awaken the child at intervals subsequent to any injury to the head for fear the so-called sleep may be in reality compression of the brain. Lastly, a word as to operation for some of the later effects of fracture of skull, especially epilepsy. Dr. Allen Star at the American Medical Association, 1906, stated that not more than 2 % of cases of epilepsy are open to operation, and that it was useless to trephine in this condition, even though caused by a fall or blow, unless the attacks presented the localized epilepsy recognized as Jacksonian, and further that in only about 20 % of cases operated upon has a permanent cure followed, some scar tissue or resulting adhesions favoring recurrence. My experience has been confined to three cases of epilepsy and with indifferent results. One was benefitted for a short time only, the seizures returning in a few weeks; one was lost track of, and in the third case no beneficial effects whatever followed the operation.

D. E. MUNDELL.

INFECTIVE JAUNDICE.

THE following synopsis of a case of infective jaundice in a boy aged 10 is of interest on account of the extreme severity of the attack, which produced absolute paralysis of deglution and speech for a period of nine weeks, and of locomotion for several months, and ended in recovery after nine months.

J.S., a young boy of 10 years, was suddenly seized Friday, October 19th, with slight pains in the stomach and right

shoulder. Temperature was 102° and pulse 85°. After a purgative pill had operated freely, the pains all disappeared, but temperature remained at 102°, with slight tenderness over the stomach and complete anorexia.

Four days later, Tuesday, Oct. 23rd, patient began to vomit, and this continued constantly for five days, during which time he became more and more drowsy, until by Sunday he was partially comatose, could be roused to answer in monosyllables only. Not till Thursday, the seventh day of his illness, did bile show in the urine, then eyes became slightly tinged, and the skin became jaundiced. The bowels were kept freely moved with calomel and salines, and the movements were always dark until the eighth day, when they became putty like.

At the end of the first week the liver began to enlarge and increased until by the fifteenth day it reached three inches below the right costal margin and the left lobe filled the epigastric space.

With the onset of the comatose condition the muscles became extremely flaccid, the knee jerk disappeared, and there was incontinence both of bladder and rectum, but the vomiting, which had been continuous, now ceased. On the eleventh day a small petechial rash appeared, followed in a few hours by an erythematous elevated rash, like giant urticaria, which covered the whole body. He became deeply comatose, could not swallow anything, marked muscular twitchings of the right side of face and right arm began, thumbs became turned in, with Cheyne-Stokes respiration and pulse irregular from 60 to 70, and temperature subnormal. Examination of eye grounds revealed nothing abnormal, but pupils were dilated and sluggish. The patient had now to be fed by nasal catheter for the next nine weeks, during which time he could neither speak or move a muscle of his body, and the evacuations were involuntary. And during this same period the faeces would become loaded with bile for a few days, which would again disappear, but the urine would always contain bile and the skin never clear, the liver decreasing and again increasing in size with each relapse. At the end of twelve weeks of his illness patient was able to swallow a little water and to speak in monosyllables, to move

his arms and later his legs, muscles became less lax, and he gradually regained use of both arms and after a few weeks of his legs, and as his power to co-ordinate his muscles returned he regained his speech.

The treatment consisted of small repeated doses of calomel and salines to keep bowels clear, urotropine and salicylic acid as antiseptics, with saline by bowel and subcutaneously, hot packs and the sustaining of the patient as required.

C. H. Bird, Gananoque.

WEST AFRICAN MEDICAL SERVICE.

The West African Civil Medical Establishment consists of a Principal Medical Officer, a Deputy P.M.O., several Senior M.O's, and a number of M.O's in each of the four large colonies. The number varies according to the extent of territory and official staff.

In each district of the colony there is stationed a Commissioner, who administers the law, usually a medical officer and in many cases an officer in command of soldiers, the soldiers being replaced by police under the Commissioner or a European police officer as the natives become more peaceful.

It is the duty of the medical officer to attend to the cases of illness occurring in the officials, soldiers, police, &c., in his station. Any one not a government servant is considered a private patient.

The medical officer is also in charge of a number of vaccinators and the attempts at better sanitation in the various towns in his district. He tries by explanation of the value of simple sanitary reforms, the segregation of persons suffering from infectious disease, the vaccination of children and adults, &c., to help the native to a life much more healthy than his accustomed lot.

This has to be all done through the chiefs or head men of the villages, and it is surprising with what good results in one

or two cases, but in the majority of places the chiefs cannot be made to believe in reforms and try to carry them out.

The habits of the natives are filthy, and rain about the only sanitary force at work. Thus the towns are thoroughly flushed out in the rainy season.

Though this flushing goes on, as there are no drains, many puddles, swamps and pools in sluggish streams are left, and here mosquitoes breed to carry infection from one person to another.

Malaria is the chief complaint on the West coast, and as it is a mosquito-borne disease the conditions are excellent for its dissemination. In some towns as many as 80 per cent. of children show parasites in the blood and some enlargement of spleen.

As they grow older and the fittest survive they are somewhat immunized, and in the adults usually when an attack of fever comes on a rest and saline are all that are required.

The natives have a few simple remedies, such as styptics, purges, fomentations, &c., but mainly rely on charms, or as they are called, Juju. Thus a man with an infected toe or swelling of the foot from pus collection due to any cause, such as guinea worm, chiggers, &c., will tie a number of shells, leather trinkets, &c., about his ankle.

One tribe of natives are said to treat a broken limb by making a bed for it in sand, but, as far as I know, no attempt at extension is made.

A favorite dressing for wounds is made of horse droppings pounded in water. Thus many large foul ulcers are formed, which come to our care.

In trypanosomiasis the natives are known to excise infected glands, chiggers are picked out, and incisions are made over swellings to relieve tension.

The native, except possibly where surgery is necessary, prefers his Juju man, unless he has been in contact with Europeans some time. Thus inland few visit the medical officer, while near the coast he will see many more.

R. C. Hiscock, M.O.,
Southern Negiria.

BOOK REVIEWS.

TIGERSTEDT'S PHYSIOLOGY, translated by Dr. J. R. Murlin, Assistant Professor of Physiology in Bellevue Hospital Medical College, New York.

Taken as a whole, this is one of the best text-books which we have seen for second year medical students.

It is the practice, in some colleges, for the professor to recommend a comparatively large text-book in physiology to first year students, with the expectation that such a book will cover the subject for the two sessions during which physiology is studied. In our opinion this is a mistake. A first year student soon gets hopelessly lost in the multitude of facts which are discussed in a large text-book. A good teacher will never start his students at this extensive subject by putting a treatise in their hands. He will, instead, recommend a book which gives the beginner a bird's eye view of phsiology, and when he has mastered such a book or attended a first year's course of lectures on elementary physiology, the student is ready in his second year to attack such a book as Tigerstedt's. Even in a second year's course, great good judgment is necessary in deciding what shall be included and what shall be excluded. Because general physiology is a very extensive subject, covering as it does the whole range of animal life, from the protozoa up to man. Some of this general physiology the medical student must have, as a foundation for the physiology of the human being. To fix the limits of this general physiology is a most difficult task. If made too extensive, a heavy burden is laid upon the student; if omitted altogether, he gets a distorted view of what is sometimes called human physiology.

Moreover, a huge mass of facts in practical medicine, in experimental pathology and in pharmacology have been accumulated in recent years and have a distinct significance in the interpretation of normal processes going on in the animal body. These might properly enough be included in a treatise on physiology. But to do so in a student's text-book would make it so bulky as to be almost useless to the average student.

Tigersteldt's book compasses in a most admirable manner all the physiology which the average second year man in medicine can be expected to read in the limited time at his disposal. We can cordially recommend it alike to medical students and to practitioners who desire to review this subject.

A. P. K.

DISEASES OF THE LUNGS. Designed to be a practical presentation of the subject for the use of students and practitioners of medicine. By Robert H. Babcock, M.A., M.D., author of "Diseases of the Heart and Arterial System", until recently Professor of Clinical Medicine and Diseases of the Chest, College of Physicians and Surgeons, Chicago; Consulting Physician to Cook County Hospital; Consultiug Physician to Mary Thompson Hospital, Hospital of St. Anthony de Padua, and of Marion Sims Sanitarium; Fellow of the Association of American Pysicians, &c. First Edition. D. Appleton & Co.

In this work of 800 pages the author discusses all the morbid conditions, infectious and non-infectious of the bronchi, lungs and pleuræ. The volume has not been written hurriedly; many chapters show evidence of extensive research and close observation. In both diagnosis and treatment the work is particularly strong. Every means of diagnosis is pointed out and carefully weighed. The open-air treatment of tuberculosis receives very full consideration. We are inclined to agree with the author that "there is a lamentable lack of knowledge among medical practitioners not alone concerning the methods of putting this treatment into effect at home, but also regarding its general principles."

The drug treatment of tuberculosis is mentioned but to be condemned in most emphatic terms. We are in hearty accord with the author when he states that the routine administration of creasote, guaiacal, &c., but serves to derange the digestion, the last hope of the poor consumptive. The whole volume is well written, the typographical work is excellent, and the illustrations for the most part are original.

A TEXT-BOOK OF THE PRACTICE OF MEDICINE for Students and Practitioners by Hobart A. Hare, M.D., B.Sc., Professor of Therapeutics in the Jefferson Medical College; Physician to the Jefferson Medical College Hospital, &c., Philadelphia. Second edition. 1907. Lea Bros. & Co. Philadelphia.

The second edition of this well-known text-book required but little change either in material or arrangemen. Some ten pages in all have been added. The work as a whole is exceedingly readable and ranks with the best in point of substance. We must confess, however, to a certain measure of disappointment with the section on Diseases of the Nervous System. Notwithstanding the fact that the author claims the work has been carefully revised, we find about the same omissions as were noted in the first edition. We look in vain for any description of sciatica, tic douloureux, herpes zoster, myasthenia gravis and the neuralgias generally. We fully appreciate the difficulty in doing even scant justice to a subject like neurology in the space allotted in the ordinary text-book of the Practice of Medicine, but we can find no justification for the entire omission of the subjects referred to. The publishers have maintained their high standard of skill and workmanship.

THE PRINCIPLES AND PRACTICE OF DERMATOLOGY, designed for Students and Practitioners. By William Allen Pusey, M.A., M.D., Professor of Dermatology in the University of Illinois; Dermatologist to St. Luke's and Cook County Hospitals, Chicago; Member of the American Dermatological Association. D. Appleton & Co., 1907.

This is a work of a thousand pages. One-sixth of the book is devoted to a consideration of the general principles of Dermatology, while to the balance is assigned the practice. The work gives evidence of having been written from a personal knowledge of the subject, and is not in any sense a mere repetition of the writings of other men or other days. Of course works on diseases of the skin, or indeed on any subject at the present time, cannot but duplicate each other to some extent, but each bears the impress of its author's personality. This is especially true of the work under review. The illustrations—367 in all—are admirable. The publishers have given the volume an attractive setting. J. T.