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## Original Communications.

### PSOROSPERMOSE FOLLICULAIRE VÉGÉTANTE (DARIER).*

BY A. R. ROBINSON, M.B., ETC.

Professor of Dermatology in the New York Polyclinic, Attending Physician to the New York Cancer Hospital, etc.

Under the name of psorospermose folliculaire végétante, M. M. Darier and Thibault, in 1889, described a peculiar condition of the skin which had probably been previously confounded by dermatological writers with other cutaneous affections, and which was already separately described by Dr. J. C. White, of Boston, under the name of keratosis follicularis. According to Darier, there exists in man a group of cutaneous diseases which merit the name of pserospermoses, being due to the presence in the epidermis of parasites of the order sporozaires, of the group psorosperms or coccidia. In one of these diseases the coccidia of a particular species invade the follicular orifices of a greater portion of the cutaneous surface, where they appear in the form of round bodies, generally encysted and contained in the epithelial cells, or as refracting granules, the accumulation of which forms a plug which projects from the orifice of the follicle. "The presence of these bodies enables one to make a diagnosis of the disease, as they are not met with in any analogous clinical affection. The neck of the follicles invaded become secondarily the seat of papillomatous vegetations, which can develop to a great degree and form real tumors. The affection, from an etiological point of view, should be placed with Paget's disease of the nipple, and probably with molluscum contagiosum."

The disease called molluscum contagiosum, according to Neisser of Breslau, is caused by psorosperms, but this view has not yet secured anything like general acceptance, many pathologists, including myself, regarding the molluscum bodies as chemically changed epithelial cells and not organisms, although believing the disease to be a communicable one and parasitic in nature. In epithelioma, especially that clinical form known as Paget's disease of the nipple, which was generally considered to commence as an eczematous process, Wickham has endeavored to show that psorosperms are very abundant, and argues with much force and plausibility that they are the essential factors of the disease, and the cause of the anatomical changes which occur.

Returning to the subject of my paper, Darier showed a case of psorospermosis follicularis at a meeting of the International Congress of Dermatology and Syphilis held in Paris in 1889, occurring in a man forty-two years of age, in whom the disease had lasted seven or eight years, commencing insidiously and later assuming an aggravated form, especially during the last two years. The following is an account of the eruption as taken from the transactions of the Congress:

*An address delivered before the Pathological Society of Toronto, December 18th, 1890.

"The isolated lesions had the appearance of papules surmounted by a crust; but if the latter be removed it is seen to be not a crust, but a small, obtuse horn plunged into a dilated follicle orifice, and having a softer extremity, with a sebaceous aspect. The margins of the orifice are somewhat elevated and papular in character. In the axillary and especially inguinal regions the lesions are larger, conglomerated, and forming by their union true tumors, which become excoriated on their surface. Where the eruption was confluent, as on the sternum, scalp, axillæ, and back, there were brownish crusts, more or less fatty to the touch, and formed by a series of irregular hard formations rather adherent to the skin."

In an article in the *Annales de Dermatologie et de Syphiligraphie*, he summarizes the clinical aspects of the cases studied as follows:—"The lesions are almost always spread over the greater part of the cutaneous surface, but have points of election where they attain a maximum of development, or at least of confluence; they are, the scalp, face, presternal region, flanks, and especially the inguinal regions. In the first stage the elementary lesion is a small papule surmounted by a dark brownish or grayish crust, which is dry and hard to the touch, adheres firmly to the integument, and is a true horn, imbedded in an infundibuliform depression by a conical or cylindrical extremity, dirty-white in color, of semi-solid consistence, and somewhat fatty to the touch. The depression of the skin which receives this horn is slightly entormé at the margins, a little elevated, and manifestly corresponds to a dilated orifice of a hair-sebaceous follicle. Where the lesions are confluent there is a brownish or earthy-like layer in the skin more or less fatty to the touch; there is a series of irregular compact elevations giving a rasp-like feeling to the hand. Removal of this layer shows the skin irregular and rough, riddled with small, funnel-shaped orifices; the epidermis is not destroyed, and there is no oozing of blood. In a more advanced stage the lesions are larger; in certain parts the elevated margin is deprived of epidermis and appears ulcerated, whilst sebaceous matter, either pure or mixed with pus, can be pressed out of the follicle orifice."

The disease commences as small papules the size of a pin-head and almost of the color of normal skin; as they increase in size they become somewhat hyperæmic, and in an advanced stage they are hemispherical or flattish in form. The summit of some is excoriated by scratching, and carry a hemorrhagic crust. When the lesions become confluent they form elevated patches covered with flattened, yellowish or brownish corneous or fatty concretions; or the corneous mass may form marked elevated collections, or even papillomatous growths.

Microscopical examination of the lesions in the cases observed by Darier showed the accumulation of special matter in the neck of the follicle, changes in the epidermis, especially in the rete, and some circulatory disturbance in the corium. The secreting portion of the glands was unaffected. Sections showed that the neck of the hair and sebaceous gland follicle was the principal seat of the lesions, but not exclusively. "The neck of the follicle is dilated, cone-shaped, and filled with a coherent mass of corneous-like material, which extends from the base of the cone to above the general surface, and corresponds to the adherent crust already described. The rete is hypertrophied, as shown by the presence of abnormal projections of this layer into the corium, both on the general surface and along the hair follicle. There is also a papillomatous growth of the corium towards the epidermis. These changes Darier believes are due to a special organism appearing under the form of round bodies, nucleated and surrounded by a thick membrane, and situated in the interior of the epithelial cells, displacing or pushing aside its nucleus. They are present in great numbers in the base of the cup, whilst the horny plug is composed in great part of these same bodies, which here have become transformed into refracting granules. They are also present in all portions of the rete layer. In old lesions the projection of the rete into the corium and the papilloma-like new formation of connective tissue was very marked, and resembled closely the condition present in epithelioma."

Dr. J. C. White, of Boston, has described under the condition keratosis follicularis two cases with very similar clinical conditions to those present in Darier's cases. Sections were studied by Dr. Bowen from these cases and he

found similar histological changes to those above described. There was dilatation of the mouths of the follicles, the enlarged space was filled with a horny mass, there were prolongations of the rete into the corium, the glandular structures were not implicated in the process, and the so-called psorosperms were present. These peculiar bodies escaped Dr. Bowen's special notice until after Darier's description, just as they escaped, much to my regret, my notice in a case observed by me about eight years ago, although they were plentiful in some of the sections. Dr. Bowen was not satisfied, however, that the psorosperms were ever intra-epithelial in his sections, and furthermore he found that the horny plugs were not made up, as Darier states, of simply refracting granules but of corneous cells, the result of a hyperkeratosis. "Microscopically, sections cut parallel with the long axis of the horny plug showed the round psorosperm-like cells at the base of the concretion, and they could be traced upward some distance, gradually becoming flattened and fused together, until in the firm, hard, upper portion the mass is composed almost entirely of lamillæ having much the appearance of broad bands of fibrous tissue, arranged in bundles running vertically and obliquely and containing small elongated nuclei." As the bodies in question are said, when situated in the granular layer, to contain granules characteristic of this layer of the epidermis, and show the same reaction to staining agents when in the stratum corneum as do the tissue cells of the part, Dr. Bowen thinks they must undergo at least a partial keratosis, a change not to be expected of an animal parasite.

In the *Journal of Cutaneous and Venereal Diseases* for 1886, Dr. Morrow, of New York, described a rare case of cutaneous disease under the title of keratosis follicularis, and this case has been referred to by Dr. White in his article as presenting many features in common with his cases. As I made a most careful microscopical examination of some of the lesions in this case and failed to find any psorosperms or signs of special activity of the rete or of inflammation of the corium, I will briefly refer to the clinical characters that were present. The eruption occupied the entire follicular apparatus of the skin, with the exception of the face, palms, and soles. The ducts of the sebaceous glands projected above the general surface and filled with a comedo-like substance, which in some cases formed projecting plugs from one-quarter to half an inch in length. This material, when pressed out, was hard and dry in the outer portion and softer within the follicle. Removal of the plug left the duct dilated and projecting. None of the follicles showed evidence of irritative action or signs of inflammation, differing in this respect very greatly from the cases described by Darier. Microscopical examination showed a hyperkeratosis of the follicular orifice and a comedo-like collection of material in the central part of the lesions.

I have had one case of this condition under treatment or observation during the last seven years. He was first a patient of Dr. Ludwig Weiss, of New York, and has been seen by all the New York dermatologists, who regarded the case as an example of lichen ruber of Hebra when shown before the Dermatological Society about seven years ago. That was before Darier described his cases. Last year Dr. Lustgarten saw him and recognized the affection as analogous to those described by Darier and White, and hence if there is such an entity as psorospermosis follicularis cutis, this case should be regarded as Dr. Lustgarten's case of that disease. With this statement I will now give a short history of the eruption as observed during a severe stage of the disease. M. L., male, æt. 49 years, was in good health until he entered the United States army during the civil war. The eruption appeared after he had been about one year in the service, the lesions forming upon the forehead and sternum and consisting of small dark-red papules. Since that time the eruption has never disappeared, although varying greatly as regards objective and subjective symptoms at different periods. The eruption gradually extended, so that at present it occupies the greater portion of the body. As already stated, the eruption commenced as dark-red, elevated papules, which after a time, owing to increase in the number of lesions within a given area, gave a rough, rasp-like feel to the fingers, and presented many of the characters of lichen ruber of Hebra, and was diagnosed as such by all the dermatologists who observed the case. Whether any of Hebra's cases would be diag-

nosed to-day as examples of psorospermosis follicularis cutis or not, must remain a question.

At present the patient has an outbreak of the eruption, that is the eruption is in its severest form, and the present description refers to this stage.

Head: Partial alopecia of the scalp, thinning of the hair, most marked upon the upper and frontal parts. The entire scalp is thickened, less movable than normal, and covered with crusts of varying thickness, dirty yellowish in color, and fatty to the feel. Upon removal of the crusts the dilated orifice of the excretory duct of the sebaceous glands is very distinct; but no plugs are present, that is, there is a condition very similar to that of the crusty form of a seborrhœal eczema. Left ear: Thickened, inflamed, and at junction with the head there is a papillomatous condition like in eczema vurucosum, whilst at the free margin the surface is red and moist, like an eczema rubrum. The skin of the external auditory canal is thickened and covered with a thin layer of fatty scales, as in seborrhœal eczema. The right ear is normal except at junction with head, where the condition is similar to that on left ear. Face: The skin is thickened and muddy-like in appearance from hypertrophy of the corneous layer, with marked dilated sebaceous duct orifices over the entire surface, but most marked upon the nose. Upon the back of the neck the condition is similar to that upon the face, except that the follicular orifices are not so distinct. A few lesions pin-point sized or somewhat larger, reddish in color, and having a hair in the centre; others pinhead-sized, and reddish and slightly flattened, without a hair, are present. On both shoulders there is a large number of isolated or grouped pinhead to pea-sized yellowish-brown or dirty brownish-red elevated lesions, covered with a few scales. The orifice of a sebaceous duct can be seen in the central part of many, but no plugs like those described as existing in Darier's cases were present. If the scales or crusts were removed the skin was found to be slightly red, and sometimes oozing of blood followed their removal. The scales could be removed in a lamellar form. The pea-sized lesions showed the same characters as the smaller ones, except there was more scaling, and upon removal a shining epidermis was left. In some places grouping of the lesions was marked and coalescence was observed in some places. Where lesions have existed and disappeared, the part is pigmented and shows slight atrophy. Upon the back, from scapular to lower part of the lumbar region, the eruption is very general, symmetrical in distribution, and somewhat pyramidal in form. The lesions number perhaps 300 to 400 in number, and at the lower part of this field are isolated, and of somewhat similar character as that of the large lesions already described, *i.e.*, are dark-red, elevated, sharply limited, and covered with dirty-white or brownish scales, not easily detached. There are no follicular orifices to be seen and no plugs. In the central part of this area the lesions are not so elevated, are of a brighter red color, and not scaly. They are firm and the skin is infiltrated. Where lesions had existed pigmentation was left behind. In some places lesions much like those in some chronic diffuse patches of lichen planus were present, and could not be diagnosed from this eruption in some areas as large as two inches in diameter.

Front of thorax: Upper part to second rib, like eruption on shoulders; below second rib to a line below nipples part-covered with hair. On right half of this area there is much pigmentation and a few lesions the size of a large pinhead. Over the sternum and beyond for some distance there was a moist red skin covered with crusts composed of serum and fatty degenerated epithelial cells, the whole aspect being similar to that of moist seborrhœal eczema in the central portion of an ordinary papular eczema toward the periphery. The itching is intense in this region. The whole of the right side of thorax and abdomen between the line of the nipple and that of the axilla is studded with lesions of all sizes, from pin-point to pea-sized, but the majority are large pinhead sized, and over large areas they have coalesced. They have similar characters to those upon the shoulders, *i.e.*, elevated, sharply limited, covered with scales or crusts, but nothing like plugs are present, nor are the follicular orifices distinct. In the umbilical region the condition is exactly similar to a moist eczema seborrhoicum of this part. The lower part of the abdomen is similar to the parts just described. The penis and scrotum are free; the legs are also free.

Arms: Inner side from axilla to two inches

above the elbow from fifty to one hundred pinhead-sized or larger lesions of similar character to those of shoulders. Forearm: Left side, extensor surface, elbow to wrist, an infiltrated patch with isolated lesions at centre; the rest infiltrated and scaly, like an eczema in children more than a lichen planus. At the lower part near wrist there is serous exudation with yellowish crusts like in impetigmoris eczema—a suppurative catarrhal dermatitis and red surface beneath. The inner surface of the forearms is free except upon the lower half; there are a few isolated lesions. Right forearm same as left, but the extensor surface is now free. The palms were never affected. Back of hands and fingers: Isolated, closely seated, small pinhead-sized, slightly red lesions, with hair in centre, in many making a picture very similar to that in pityriasis pilaris Devèrgie. Nails: Thick, broken, deformed, like in eczema, but there is no eczematous condition of fingers. Nails of feet similar to those of the hands.

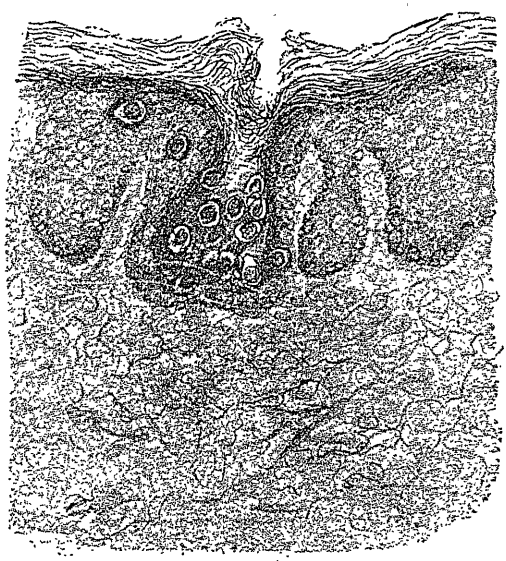

FIG. I.

It will be seen from the above description that this case evidently belongs to the same class as those described by Darier and White as far as objective characters are concerned, although there were no plugs, properly speaking, in this case, but rather collections of sebaceous matter and epithelial cells upon the general surface.

Microscopical examination: I removed seven years ago several pieces from the patient and found the following changes: A recent papula showed the corneous layer to be greatly hypertrophied from an increase in the number and size of the corneous elements. There was also an aberration from the normal process of cornification, as many of the cells contained nuclei. The nuclei are particularly abundant at the orifices of the sweat glands and hair follicles. All the corneous cells are larger and more polygonal in shape than normal, especially in the lower strata. The rète is hypertrophied in some places and normal in others. There is growth downward of the interpapillary portion also. The granular layer and the stratum lucidum are less distinct than usual. The papillæ are larger from the interpapillary growth of the rete; the blood-vessels are dilated, and there is some exudation and emigration present. The sweat glands are normal except the duct in the corneous layer, the walls of which are formed with large cells, some of which have vesicular nuclei. The hair follicles are unaffected except at the orifice, where there is a large collection of corneous cells. The muscle bundles are much hypertrophied.

In old papules there is a continuation of the same process, and after a time retrograde changes leading to atrophy of the part; or there is a return to a normal condition by cessation of the abnormal keratosis process. The corneous layer is much thicker than in a recent papule, but the character of the corneous elements as regards size, shape, etc., are the same. The rete is hypertrophied and its upper surface uneven. The cells are not larger than normal, and in many places are no smaller from pressure by the corneous layer. The cutis papillæ are but slightly enlarged, the papillary blood-vessels somewhat dilated, and there are a few round cells, emigrated, outside the blood-vessels. The muscles are hypertrophied. In the centre of old papules a retrograde process often occurs, consisting in a degeneration of the rete and destruction of a portion of the underlying corium. The process, therefore, is a para-typical keratosis.

In fig. 1 is shown a drawing from a section of the earliest papule I could find upon the body. It was very small, pinhead in size, slightly ele-

vated, firm, whitish in appearance, and without a scale or crust. When excised I was in doubt as to whether it represented a lesion of the disease or not. The drawing is intended to show the epidermis and the peculiar bodies present in it. The corneous layer is slightly thickened, the rete hypertrophied, and at the mouth of the follicle is a collection of the so-called psorosperm bodies. Similar bodies were found in sections from every lesion, although some sections would not contain them although the epidermis changes were present. I need not enter into any detailed description of them at present, as they are similar to those described by Darier, and also because I intend discussing their nature in a future paper, as I have a considerable amount of recent material in my possession which, I think, will enable me to obtain an insight into their nature and significance as concerns this particular cutaneous condition. I will only state that no psorosperms were ever found near the general surface, so that the argument of Dr. Bowen is supported by my specimens. I might further state that although I saw these bodies seven years ago, I regarded them at that time as merely peculiarly changed epithelial cells without any special significance.

In considering the significance of these bodies, the following questions require our consideration and study: (1) Are they found in every well-marked case of the cutaneous condition above described? (2) Are they present in every lesion in the earliest stage of formation? (3) Are they present in other dermatoses? (4) Are they organisms? (5) Are they the cause of the cutaneous lesions?

(1) Are they found in every well-marked case of the cutaneous condition described by Darier? With the exception of Morrow's case, they have been present in all the cases. They were not present in the case of Dr. Morrow, for I examined lately many sections from this patient and none were to be found; but an analysis of the symptoms shows, I think that apart from the presence of epithelial plugs, the case bore no resemblance to the conditions existing in the other described cases. We may therefore consider that, in all the cases so far reported, these peculiar bodies have been present.

(2) Are they present in the earliest stage of all the lesions? This question cannot be answered at present as I am not aware that the point has been studied, as the drawings from Darier's cases and White's are from sections of lesions of some duration, as shown by the presence of plugs and the rete proliferation. I have examined one lesion in the earliest stage of recognition, before it showed signs of crust or plug formation or changes in the corium, and found large numbers of these bodies as shown in fig. 1. It is fair, therefore, to presume that they are present in all lesions at the earliest stage until the contrary is shown.

(3) Are they present in other dermatoses? I have examined sections from cases of eczema squamosum, eczema veruccosum, psoriasis, lichen planus, pityriasis pilaris Divèrgie, nævus sinus lateris, rodent ulcer, squamous epithelioma, and molluscum contagiosum. In none except rodent ulcer and squamous epithelioma were these bodies to be found. In lichen planus an occasional cell, not to be distinguished perhaps from a psorosperm, was found, but they were probably only vacuolated epithelial cells of the rete. I will not enter into a description of the bodies present in epithelioma, as Dr. MacCallum will discuss that subject. I wish only to draw attention to the great difference in the clinical course of psorospermosis follicularis cutis and epithelioma, and to state my conviction that, if both depend upon psorosperms these bodies cannot be identical ones but only related to each other.

(4) Are they organisms? As already stated, I will postpone a discussion of this subject for a subsequent paper upon the subject, merely stating at present that the existence of such a group of peculiar bodies as exists in fig. 1. cannot be traced to the invasion of the epidermis by leucocytes, as they evidently existed before circulatory changes began in the corium.

(5) Are they the cause of the cutaneous lesions? If it is proven that these bodies are organisms, that they are present in the very earliest stage of the cutaneous disease, that they are present in every lesion at its commencement and that they are not present in other dermatoses, that their presence by analogy drawn from the known action of psorosperms upon other tissues, either in man or the lower animals, would explain satisfactorily the anatomical changes occurring in the part, then I

think we must conclude that these bodies are the cause of the disease, and that the condition described by Darier as psorospermosis follicularis végtanté represents an entity—a special cutaneous disease.

In the case of the patient whose eruption I have described, there is one peculiarity as regards the spread of the lesions that apparently at least is opposed to the disease depending upon psorosperms. He informs me, and I have been able to substantiate his statements, that he has at indefinite intervals acute outbreaks of the eruption, that is, the disease is kept up by successive acute outbreaks of new lesions, which gradually subside and finally disappear, to be followed by formations of new lesions whilst the old ones are undergoing retrograde changes, or after many have entirely disappeared. During these acute attacks he feels very ill for several days, "every part of his body hurts him"; he is confined to his bed or room; then hundreds of lesions appear, after which there is an interval of comparative relief. This has been supposed by one writer to depend probably in this case upon malaria, but I find no ground for such a diagnosis; neither do I think the general conditions can depend upon the presence of psorosperms, or it would be a more continuous one. It is the one point in the history of the case that seems incompatible with the view that the lesions depend upon such bodies as psorosperms; but as this condition was not observed in the other cases described, it is possible that the general condition has no relation to the cutaneous disorder.

The whole subject is one of great interest, and well worthy of further study; and its importance is, I trust, a sufficient excuse for my bringing the subject before the members of the Pathological Society.

## THE CONTAGIOUSNESS OF PHTHISIS: ITS PRACTICAL ASPECTS.

BY ALEXANDER M'PHEDRAN, M.B.,
Lecturer on Clinical Medicine in the University of Toronto.

Radical changes in our views on any question of either fact or theory require time to fructify. In nothing is the truth of this shown more clearly than in connection with phthisis. Koch's discovery of the bacillus tuberculosis as the cause of phthisis required several years to obtain general acceptance, and after it was generally accepted few were prepared to acknowledge the contagiousness of the disease. About four years ago the question of contagion was warmly discussed at the meeting of the Ontario Medical Association, the theory finding acceptance with only a small proportion of those present, even although the majority acquiesced in the view that the bacillus is the active cause in the production of phthisis, and it was pointed out that, that doctrine once admitted, it followed almost as a corollary that the disease could be produced only by transmission. In the meantime professional opinions have so changed that now probably few can be found who doubt the transmission, of some cases at least, by contagion. Unfortunately our practice often lags behind our theories, so that there seems to be little yet done by way of application of the theory of contagiousness of tuberculosis.

In common with others who have been using Koch's lymph, or tuberculin, in hospital practice, I have been consulted by many phthisical patients from various parts of the country as to the advisability of undergoing treatment with the lymph. In most of these there was a decided history of contagion, as, *e.g.*, a healthy, robust man becoming affected before the death of his wife from tuberculosis; one member of a family contracting the disease while away from home, and other members becoming affected after his return home, consumption being unknown in the family previous to this.

In all cases I made careful enquiry to ascertain what precautions had been taken to protect those exposed to the infection, and rarely found that any preventive means had been adopted. This is due, of course, to the failure on the part of the profession, as well as of the public, to realize the actual existence of a contagium, and that preventive measures can in the least control the spread of the disease. We have so long been taught that heredity is the chief factor in the causation of tuberculosis that it is difficult to eradicate this theory and implant another, much less acceptable to our feelings, as firmly in its place. Since the discovery of the bacillus nothing has occurred tending to enforce on public attention the fact of the contagiousness of tuberculosis equal to the introduction of

Koch's lymph, teaching, as it does, that the disease is always and wholly due to the bacillus; and even should it prove, as feared by many, wholly ineffectual in curing, or even mitigating the disease, it will nevertheless have conferred an incalculable boon on humanity if it leads to effectual methods being adopted for the protection of those exposed. No effort should be spared to curtail a disease that claims one-seventh of the race as its victims. The necessity for such effort is further emphasized by remembering that in every case the germs are transmitted from some preceding case in man or lower animal, and therefore that, at least theoretically, it should be possible to prevent the transmission of the bacillus from the sick to the well, and thus in time wholly eradicate the disease.

There are many circumstances that render precautions against the contagiousness of tuberculosis extremely difficult. Many of those affected are yet enjoying apparently excellent health, and actively pursuing their several avocations unaware of the existence of the disease. Others, aware of their condition, are yet loath to acknowledge that they are sources of danger to those about them. Then the disease is so protracted that the greatest patience will be required to continually guard against the spread of the contagion. Then there is the further difficulty of guarding against infection from the lower animals, especially cows, whose milk, if the animal is diseased, may contain bacilli, irrespective of the seat of deposit of tubercle, disease of the teats or udder not being necessary to affect the milk.

Fortunately the breath of patients affected with pulmonary tuberculosis does not contain bacilli; they are found only in the sputum. In disease of the intestinal and urinary tract the germ is present in the fæcal matter and urine respectively. Cornet, in 1888, showed that the dust collected from the walls of rooms occupied by tuberculous patients contained bacilli, and produced virulent tuberculosis when inoculated on guinea-pigs. This was true in all cases in which the patients spat upon the floor, into handkerchiefs, or in any place where the sputum was allowed to dry and become diffused into the air as dust. In all cases in which a spit-cup was used and properly cared for, the dust of the room proved to be free from bacilli. That houses become dangerous media of infection is shown by such instances as the following: A family of seven healthy persons moved into a house previously occupied by a family suffering from tuberculosis, from which a child died shortly prior to their vacating the house. In the course of two years after the healthy family entered the house five were attacked with tuberculosis; two had died and three became seriously ill.*

† Dr. Stone, of Boston, found bacilli in dried sputum after three years exposure in cups placed on a shelf. There was no change in their form or condition. The sputum, on inoculation into guinea-pigs, was found to have lost none of its virulence.

Physicians will therefore see the pressing importance of complete destruction of all sputum which contains bacilli. All the benefit from the work of investigators as to the cause of tuberculosis and the dangerous nature of sputum will be lost if physicians in active practice do not set themselves to work to do their part towards eradicating this great public danger.

The general rules that should guide us in the prophyllaxis of tuberculosis might be included under the following heads:

(1) The complete destruction of the tubercle bacillus wherever found outside the human body.

(2) Avoidance of unnecessary risk of the introduction of the bacillus into the unaffected.

(3) Improvement of the health of the individual, especially of the susceptible.

At present we have to do with but the first head, under which is included the thorough destruction of sputum of tubercular persons, as being by far the most frequent source for the dissemination of the bacillus. It includes, as well, the destruction of all excretions liable to contain bacilli, as, *e.g.*, the fæcal discharges from patients affected with intestinal tuberculosis, and care as to extreme cleanliness of person and linen, lest small particles adhere and, drying, become diffused into the air. Also the destruction of all tubercular cattle to prevent contagion by meat and milk, the latter being especially dangerous, and doubtless a frequent means of infection, particularly in children. Unquestionably the best means of disposing of tubercular sputum is to have paper spit-cups used; these

*British Medical Journal*, vol. ii, 1890, p. 477.
†*American Journal Medical Science*, 1891, p. 275.

should be burnt from time to time as necessary, care being taken that they shall on no account stand long enough for the sputum to become dry. For those who cannot afford to purchase such cups, several folds of ordinary paper can be moulded into a cup or small vessel, and will then serve quite as good a purpose. Everything being thus burnt, there is no possibility of contagion being conveyed to others, if the care is taken that no sputum falls outside the cup, to dry and become dispersed through the air, or to adhere to the hands of whosoever burns the paper and cleanses its receptacle. If a cup be used without the paper, it should contain a little water to prevent drying of the sputum; the fire is the best disposition of the sputum in this case also. Such disinfectants as carbolic acid and perchloride of mercury are not reliable; they, especially the perchloride, coagulate the albumen about the bacillus, and thus take too long to destroy it, so that the sputum is likely to be thrown out before the work of destruction is complete. For cleansing the cup, boiling water is the best agent, and if the cup itself is boiled for a few minutes it ensures the complete destruction of any bacilli that may adhere to it.

In travelling, some receptacle such as a wide-mouthed bottle can be carried to receive the sputum. Equally great care should be taken in the emptying and disinfection of the bottle as in the case of the spit-cups.

All rooms occupied by tuberculous persons should be kept scrupulously clean and thoroughly ventilated. The disease being contagious, the room should contain no unnecessary furniture, carpets, curtains, or other hangings, as they soon become dust-laden, and dust is the bearer of the bacillus. Rugs, bedcovers, etc., should not be shaken in the room, as the dust thus diffused may contain bacilli.

Notwithstanding the best care it is safest to take for granted that the dust from all rooms occupied by consumptives contains bacilli. "It is therefore dangerous to inhabit a house which has been previously inhabited by tuberculous patients, unless it be thoroughly disinfected. The paper should be stripped off, and the walls whitened with lime; the wainscotting and floors should be scraped and washed with a 1 to 1000 solution of corrosive sublimate." *

*British Medical Journal*, 1b.

Due precautions against the contagiousness of phthisis demand the most conscientious care from both patients and those caring for them. To both should the danger of contagion from the sputum be most clearly explained, and the possibility of prevention of contagion by care on their part fully impressed upon them. They should be told that all cases are caused by contagion from pre-existing ones; that the disease itself is not inherited. They should be charged that on no account is a handkerchief to be used to expectorate into, as this habit, to which the most fastidious may resort, probably furnishes the most frequent means for the transmission of the germs.

The requisite care in thus limiting, if not wholly arresting, contagion of tuberculosis can be secured only by full appreciation of the danger on the part of the public; and to the profession we must look to teach the public; and that the profession cannot do until they themselves awake to a full realization of the fact that every case of tuberculosis is due to a specific poison introduced into the system from without, just as certainly as is the case with diphtheria, typhoid fever, syphilis, or any other of the specific diseases.

## A CASE OF ULCERATIVE ENDOCARDITIS, ASSOCIATED WITH PNEUMONIA.*

BY L. F. BARKER, M.B.
House Physician, Toronto General Hospital.

Kate G., æt. 35, unmarried, entered Toronto General Hospital Aug. 16th, 1890, under care of Dr. A. McPhedran. Only history of previous illness is that of anæmia, nine months ago, when she suffered from palpitation of the heart and noticed œdema of ankles. These symptoms disappeared under treatment. Very ill with la grippe last winter. Family history shows a predisposition to tuberculosis, mother dying at forty, and one brother at twenty-six, of consumption. Patient has herself complained of cough every winter for last three years. Two weeks before entering Toronto General Hospital she commenced feeling weak and languid; noticed slight, hacking cough. One night she perspired profusely. On August 12th she

*A paper read before the Pathological Society of Toronto, Jan. 31st, 1891.

"gave out" entirely, going to bed with vomiting, headache, and chilly sensations. On admission to ward 24, her temperature was 103⅘; respiration, 20; pulse, 100

States that she had capricious appetite, occasionally ravenous before going to bed. Face shows wearied expression, with some cyanosis; patient breathing through widely opened mouth. Skin, a dirty-brownish hue, dry and hot. Veins of hands show a magenta tinge.

*Circulatory system.*—Pulse, 100, small, low tension. Heart, apex-beat, 2¼ in. below left nipple and in a line with it. Beat, diffuse, forcible, tumultuous; loud blowing murmurs replacing first sound at apex and over xiphisternum; pulsation in veins of neck.

*Respiratory system.*—Respirations labored, 32 per minute; slight cough, no expectoration; dyspnœa, particularly on exertion; full breath causes pain in left side. Percussion reveals dulness over left lower lobe; bronchial breaking over same area.

*The urine.*—Pale yellow, slightly acid; sp. gr. 1018, cloudy, trace of albumen (picric acid test); no sugar; nothing abnormal seen on microscopical examination.

*Nervous system.*—Severe fronto-vertical headache; delirious at night

*Digestive system.*—Tongue, dry, brown and fissured; sordes on lips; some carious teeth; great thirst; complete anorexia; constipation; some abdominal tenderness; liver slightly enlarged; spleen, markedly enlarged.

*The blood.*—An examination showed diminution in the number of red blood corpuscles, about three million to 1 c.m.m. There was a considerable degree of leucocytosis. The w.c.b. were large, and some of them contained two or three nuclei. Dr. McPhedran found as many as seventy leucocytes in one field (Leitz syst. 7, ocular 4). The specimens which I examined were not so rich in leucocytes.

The case was diagnosed by Dr. McPhedran as one of acute ulcerative endocarditis and the prognosis pronounced unfavorable.

The bowels were opened by enema, and 10 grains of antipyrin given to relieve the severe headache; sponging when temperature above 102½. Thirty minims of tincture digitalis with five minims of liquor strychninæ were given every four hours, together with liberal doses of brandy.

The patient gradually grew worse, delirium becoming constant. On August 21st great abdominal distension came on. This was relieved by passing long rectal tube. She had dysphagia the next day, gradually grew weaker; dyspnœa became more marked; there were involuntary evacuations of fæces and urine; patient died at 6 p.m.

*Post mortem.*—August 23rd: *Ante mortem* clots found in aorta and pulmonary artery. Sixty c.c. of fluid in pericardial sac, non-inflammatory. Endocardium stained bright red. Mitral valve showed shallow ulcerations along "line of contact." Both sides of heart dilated; dilatation of left auricle particularly noticeable. Wall of left ventricle hypertrophied. Evidences of dry pleuritis over left lower lobe. Lower lobe of left lung consolidated in state of gray hepatization; same condition in lower portion of upper lobe on same side. Spleen weighed 370 grammes; very friable; hemorrhagic infarcts present. Kidneys showed cloudy swelling and infarctions. In the liver one noticed some infarctions, as well as pigmentary and fatty degenerations. The uterus proved to be a most beautiful specimen. There were a large number of small fibroids connected with it, subperitoneal and interstitial. Section through these showed the typical "whorling" of the leio-myomatous fibres. The ovaries were both diseased, containing hemorrhagic cysts.

*Remarks on the case.*—A careful study of the history of the case and the clinical phenomena leads us to accept the following view:

The patient had been profoundly anæmic for some time, as shown by above history of dyspnœa, pallor, palpitation and œdema. Possibly she was leucocythæmic, though the size of the spleen did not exceed what one might expect from a general septic infection. Moreover, microscopical examination failed to discover any increase in the lymphoid tissue of kidney or liver. The debilitated system formed a favorable nidus for the development of certain bacterial forms, and on Aug. 12th the complete prostration was due to either the onset of acute pneumonia in the left lower lobe or the cardiac ulcerative process. One would be rash to make any *positive* statement regarding the relation of heart lesion to lung lesion. Were the heart lesion primary and the pneumonitis

secondary, we would expect, (1) that the ulcerative process on the valves might be extensive, (2) that the pneumonitis would be catarrhal in its nature (inhalation-pneumonia), and (3) that the right side of the heart might just as well be affected as the left. Again, were the pneumonia primary, and the pathological changes in the endocardium secondary, we might expect (1) the pneumonic changes to be well advanced, (2) on account of the circulatory mechanism, the left side of the heart more likely to be affected than the right, and (3) the pneumonitis to be croupous. The points in the latter view are supported by the records of the autopsy. Perhaps one might be nearly correct if he regard the process as a general primary septicæmia, with severe local changes in left lung and mitral valve.

Acute ulcerative endocarditis is so frequently associated with pneumonia and pleurisy, that the complication can scarcely be regarded as accidental. In fact the connection has been noted by many observers, and the term "pneumonic endocarditis" is now used by some pathologists.*

Osler has studied a large number of these cases and described them in his exhaustive analysis of the different forms of malignant endocarditis, given in the Gulstonian lectures, 1885. Speaking of pneumonic endocarditis he says that "it certainly is a seductive view to take of its pathology, to regard the local pulmonary lesion as excited by the growth of micrococci in the air-cells, and the various consecutive inflammations—the endo- and pericarditis, the pleurisy, the meningitis, the membraneous gastritis and colitis, as due to the penetration of the organisms to deeper parts, and their local development under certain conditions dependent on the state of the tissues. The processes are all of the character described as croupous, and have as common features the presence of micrococci in a coagulable exudation. We have still to settle the identity of the organisms of the air cells with those of the consecutive inflammations; but we may reasonably hope ere long to have some positive data from investigations in this disease, which, more than any other, offers favorable opportunities for the solution of these problems." †

* Hamilton's Pathology, Vol. I., p. 607.
† British Medical Journal, 1885.

Unfortunately our present arrangements did not permit of a careful bacteriological examination of the affected organs, and consequently there are no reports of culture and inoculation experiments.

## A NEW MICRO-CHEMICAL REACTION OF LARDACEIN, OR "AMYLOID."

[PRELIMINARY NOTE.]

BY DR. A. B. MACALLUM.

In a communication recently made to the Royal Society of London, I pointed out that the occurrence of iron can be demonstrated in the chromatin of a very large number of cells, animal and vegetable, and that the firmness of its combination with the chromatin is comparable to that obtaining in hæmatin and the ferrocyanides. Concurrently with this investigation I carried on another which may be of not less interest. I had during the past two years suspected lardacein, or "amyloid," to be a chromatin. Since I discovered the method of demonstrating, micro-chemically, the presence of iron in nuclear chromatin, it occurred to me to put my suspicions as to the nature of lardacein to the test. For example, if it belongs to the chromatin class of compounds it ought to contain iron, not as an albuminate, but in a condition somewhat similar to that present in true chromatin. By a method to a certain extent different from what I used in the case of nuclear chromatin, I have succeeded in demonstrating, micro-chemically, the presence of iron in the deposit of all the specimens of lardaceous organs accessible to me, and in showing that the metal is combined in the lardacein in a manner similar to what it is in chromatin. This indicates that there is some chemical relationship between chromatin and lardacein, and a series of experiments with the latter substance seems to corroborate this opinion. That the iron present is not due to infiltration of the deposit with hæmatin, or similar compounds, is shown by the experiments. Whether lardacein *is* an altered chromatin (or nuclein) is a question upon which I reserve an expression of opinion.

When a number of other experiments on lardacein, which I am carrying on just now, are completed, I hope to publish fuller details of this investigation.

## Selections.

MODE OF ENTRY OF THE TUBERCULAR POISON INTO THE BODY.—A very good summary of the various paths of infection adopted by the tubercle bacillus is given by C. Bollinger in the *Münchener Med. Wochenschrift*, 1890, No. 43. He considers that the frequency of infection through the skin has been under-estimated. Several cases have been recorded of direct inoculation by wounds received from broken spittoons, etc., by bites, after circumcision, by morphia syringes, and earrings. Eczema and impetigo increase the susceptibility of the skin. No case has as yet been attributed to vaccination, and it would appear that the tubercle bacilli are unable to live in the vaccine lymph. They also appear unable to pierce the pores of the skin as do some of the pyogenic organisms. The susceptibility of the mucous membranes is increased by inflammatory processes, such as otitis, rhinitis, conjunctivitis, pharyngitis, etc.; from thence the poison travels to the submaxillary glands and those of the neck, and generally causes local tuberculosis of the glands. The chief point of infection is of course the lungs. Local predisposition is best exhibited by apices which have been before diseased, but have undergone a healing process. The movement is deficient both in expiration and inspiration, and the liability to reinfection is increased by anæmia, irritants (such as coal and metallic dust), constitutional influences, such as diabetes, disturbances of digestion, and unhealthy surroundings. The poison may pass through the lungs and attack the bronchial glands, under which circumstances the disease may be very insidious. The predisposition of the lungs again exhibits itself in metastasis; not every tubercular disease of these organs is due to inhalation of the bacilli or their spores. As regards primary tuberculosis of the testicles, joints, and bones, Bollinger considers that a latent hæmatogenic infection must be understood, which leaves as little trace of its point of entry as does a primary septic endocarditis or an osteomyelitis. Tubercular disease of the larynx depends upon an autoinfection through the sputum. The rarity of this disease in children is explained by the infrequency of pulmonary cavities in the rapid forms of phthisis. Primary tuberculosis of the intestine generally, combined with an affection of the mesenteric and retro-peritoneal glands, is usually occasioned by means of vitiated food and contaminated feeding utensils. Secondary tuberculosis of the intestine depends upon an autoinfection. The tubercular poison passes through to the intestine unaltered by the juices of the stomach and attacks the Peyer's patches and solitary follicules. Tuberculosis of the peritoneum, which is three or four times as common in men as in women, can arise directly from ulcers of the intestine, from tubercular abdominal glands, or, especially in women, from the urogenital tract; further, through contagion from the lungs and pleura, and finally in the course of miliary tuberculosis, or from caseous bronchial glands. Primary tuberculosis of the peritoneum is rare (3 to 4 per cent. of all cases). As regards the infection from milk, this is, in Bollinger's opinion, undoubtedly due to the udder of the cow being affected with the disease. Infection through the milk of tuberculous women has not yet been proved. In tabular form the organs of the body are thus affected, beginning with those most frequently diseased:—(1) Lungs, (2) the lymphatic glands, (3) intestine, (4) serous membranes, (5) larynx, (6) spleen, (7) joints, (8) bones, (9) liver, (10) kidneys, (11) the genital tract, (12) the skin, (13) brain and spinal cord, (14) muscles.—*Lancet.*

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THE "MEDICAL HAT" QUESTION.—In our issue of February 21st we took occasion to notice a proposal that a hat of particular make should be used as a distinguishing mark of medical practitioners. It now appears that the desire for peculiarity has not been limited to this country. As if by a side wind of suggestion, medical opinion in Berlin has, it is said, arrived at nearly the same point. There is a difference, however, and a material one. This time it is not the doctor, but his coachman, who is about to undergo alteration. In future a white hat will be for him like the fireman's helmet—a sign of urgency before which ordinary traffic will be expected to give way. The idea, it must be allowed, gives promise to some practical advantage, and many busy practitioners would be only too well pleased if by so simple a device they could scatter the obstructions which in town

practice render the daily round a protracted and a devious task. By the sick whom they visit it should be hailed as an earnest and speedy relief. If, therefore, any suitable distinction commends itself to professional taste, no serious objection, we presume, could be urged against it. There would still remain the uncertainty whether the charioteers of other interests would be willing to admit the claim of medicine to precedence on the road. On the whole, therefore, we should prefer, before advising the adoption of any scheme of hat reform, to watch the progress of the new departure in the German capital. The matter is not so urgent but that it may be still further considered.

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THE DIAGNOSTIC VALUE OF THE PHYSICAL SIGN "TRACHEAL TUGGING" IN THORACIC ANEURYSM.—Dr. R. Lea MacDonnell, of Montreal, has recently (*Lancet*, March 7th and 14th, 1891) called attention to a method of examination which he says is of great aid in diagnosticating aneurysm of the transverse arch of the aorta. It was first described by Surgeon-Major W. S. Oliver in 1878, but has never come into general use. The process is as follows: "Place the patient in the erect position and direct him to close his mouth and elevate his chin to the fullest extent; then grasp the cricoid cartilage between the finger and thumb and use gentle upward pressure on it, when, if dilatation or aneurysm exist, the pulsation of the aorta will be distinctly felt transmitted through the trachea to the hand. The act of examination will increase laryngeal distress should this accompany the disease." The physical sign is known as "tracheal tugging." With a view of forming a just estimate of its value, Dr. MacDonnell has collected the histories of all the cases of thoracic aneurysm recorded in the case-books of the Montreal General Hospital since 1878, omitting those in which the absence or presence of tugging was not definitely noted. The cases are twenty-three in number, and to these he has added two observed in private practice. In seventeen of the twenty-five cases tracheal tugging was noted. An autopsy was obtained in eight of the seventeen confirming the diagnosis. After a careful analysis of the twenty-five cases, Dr. MacDonnell feels warranted in making the following statements:

(1) Tracheal tugging is never present except in aneurysm.

(2) When tracheal tugging is present, the aneurysm is so situated as to press from above downward on the left bronchus, or upon that portion of the trachea immediately adjacent to it.

(3) Tracheal tugging may be present when many other physical signs and symptoms are absent.

(4) Tracheal tugging does not occur in aneurysms which do not involve the transverse arch.

(5) Direct pressure on the trachea does not cause tracheal tugging.

Dr. MacDonnell adds that tracheal tugging is a very early sign in the history of the case. In all the cases in which it was present, it was detected on the patients' admission to the hospital.—*N. Y. Med. Jour.*

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THE TREATMENT OF PULMONARY TUBERCULOSIS AND OF TUBERCULAR PLEURISY BY HYPODERMIC INJECTIONS OF GUAIACOL AND IODOFORM.—Picot (*La Semaine Médicale*, 4th March, 1891) records the results obtained in twenty-five cases of pulmonary and pleural tuberculosis by the combined use of those remedies. The drugs were introduced subcutaneously in liquid form, dissolved in olive oil, each c.c. of the fluid containing 0.01 centigramme of iodoform and 0.5 centigrammes of guaiacol. The injection was made into the supra-spinous fossa. The treatment was commenced with 1 c.c. of the fluid, but as much as 3 c.c. could be injected without any local reaction at the seat of injection, save the occasional occurrence of a slight degree of numbness, which quickly disappeared. The dose was repeated on every second day. The absorption of the fluid was demonstrated by the author, through the detection of iodide of potassium in the urine, and in one case, *post mortem*, in the lungs. No inconvenience or disturbance followed the injection, except sometimes a certain degree of colic and diarrhœa, which passed away when the treatment was suspended for a few days. In those cases which terminated fatally from the natural course of the disease, there was no sign of any recent increase of congestion or other change which might be supposed to be of serious im-

port. Of the twenty-five cases of pulmonary phthisis thus treated, no important improvement was observed in three which finally ended fatally. But the *post mortem* examination showed that the vomicæ were drier than usual. In the other twenty-two cases, amelioration and improvement in varying degree were noted. This consisted in diminution or disappearance of cough and of expectoration, reduction of physical signs, diminution in bacilli, and gain in weight. The author speaks with great reserve of cures, but has much confidence in emphasizing the degree of improvement obtained. Eight cases of pleurisy were put under treatment, of which three were discharged completely well, and five were progressing towards recovery when the latest report was made.—*Edinburgh Medical Journal.*

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KUMYSS AS A FOOD FOR BABIES.—In a recent issue of the *Nightingale*, Dr. John H. Ripley says, after having spoken of condensed milk: "The next best food for babies is Dr. Brush's kumyss. I say Brush's because that is the best kumyss made. In a certain proportion of cases it even excels all other foods. I will give you an instance: A doctor came to me in regard to his own child. The baby was four months old and was suffering from summer complaint. He had tried all kinds of foods—sterilized milk amongst others. The child had wasted to skin and bone, and he was afraid that it could not live more than a few days. I was about getting off to the country and I told this doctor that I could not go to see his child, but that I would advise him to try Brush's kumyss. He did so and the child recovered. He told me that the child commenced to pick up at once."—*New York Medical Journal.*

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A CLAIRVOYANT OUTWITTED.—A correspondent sends us the following newspaper anecdote: "The faith of certain Bangor believers in the powers of the so-called clairvoyant physicians has been shaken by a recent incident. It is one of the boasts of these physicians, that if a patient sends them a lock of his hair they can prescribe a proper treatment. In order to test this point a number of wags in a near-by town cut a few locks of fine hair from a dog's tail and sent it by mail to a well-known Bangor clairvoyant, signing a lady's name to the letter. After a few days a reply came from the doctor, declaring she had some serious internal trouble, which could be cured only by placing herself under his care or that of his wife. He further said that allopathic malpractice had caused her trouble. The young men who practised this imposition are now having a good deal of fun at the doctor's expense."—*N. Y. Med. Jour.*

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ANTISEPTICS IN RHYME.—That eminent poet and builder of lofty and sustained iambics, Dr. G. M. Deney, of Keytesville, Mo., in a recent contribution to rhyme and surgery (*Journal of the National Association of Railway Surgeons*) says:

"Although in details we may vary,
Some plan is necessary
To heal a wound by first intention.
Some needful rules I here will mention.
The surgeon first his clothes should doff,
His coat and vest and shirt pull off.
In rubber apron should be drest,
Extending from the feet to chest.
Scrub well his hands with soap and water,
If he don't he ort'r.
The patient, sponged till all is sweet,
Is laid upon a rubber sheet.
The towels all on chairs are hung,
And water by the waiter brung.
As vicious germs will always breed,
Some antiseptic he will need.
As bichloride is dangerous stuff,
One in two thousand is enough.
Carbolic acid one one-thirty
Will keep the knives from getting dirty."

—*N. Y. Med. Rec.*

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DR. LOUIS S. MCMURTRY says: "It is now well known that most cases of hæmetocele, so called, are in reality cases of ectopic pregnancy. The treatment in all cases should be immediate abdominal section. The uterine appendages of both sides should be removed, inasmuch as the predisposing salpingitis is symmetrical. I have now operated in three cases within the last two years for ruptured tubal pregnancy, and all have recovered. The only safety in such a condition is immediate operation. The diagnosis before rupture is practically impossible. When rupture occurs the indications for surgical interference are as positive as in treating a wound of the brachial artery."—*Med. Mirror.*

THE DEODORIZATION OF IODOFORM BY CREOLIN.—Dr. Ludwig Vaczi, a practitioner in Nagy-Karoly, communicates to the *Medicinish-chirurgische Rundschau* his discovery of the power of creolin to deodorize iodoform. He had prescribed an ointment consisting of one part of creolin, two of iodoform, and twenty-five parts of vaseline. On the following day he was surprised that not only was the usual color of iodoform ointment changed, but that there was no smell of iodoform and only a slight smell of creolin. He points out how important it is in many cases that the presence of iodoform should not be known by its odor, and considers creolin the very best of all deodorizing drugs for the same. It not only does not irritate, but it is also itself a good disinfectant.—*Lancet.*

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THE TREATMENT OF TUBERCULOSIS BY CANTHARIDINATE OF POTASH.—Professor Liebreich (*Berlin Klin. Wochen.*, 1891, No. 9) communicated to the Berlin Medical Society, on Feb. 25th, a paper on the "Treatment of Pulmonary Phthisis by means of the Active Principle of Cantharides." The internal use of cantharidin is followed by the exudation of serum from the capillaries of the kidneys, lungs, and other organs. This exudation is more abundant in the case of capillaries which are already irritated. Presumably, therefore, a dose of cantharidin which is insufficient to produce such exudation from healthy capillaries will suffice to do so from capillaries previously disturbed, as is the case with the pulmonary capillaries in phthisis. The value of the exudation might be twofold: *(a.)* The serum might improve the nutrition of cells and so correct a morbid tendency; *(b.)* It might act prejudicially on the bacilli. Liebreich advises that the treatment be commenced with one decimilligramme of the cantharidinate of potash. He allows a day to intervene and then increases the dose to two decimilligrammes. His maximum dose was six decimilligrammes. He emphasizes the care that is required in the avoidance of the treatment where the kidneys are disturbed. His experiments were in course of progress, but so far as they went, they encouraged him to believe that good results were to be expected from the method. After the communication was made, Drs. Heymann, G. Guttmann, and B. Frankel, maintained the value of the method by reference to a considerable number of cases which they had thus treated. The cases were mostly laryngeal, with frequent pulmonary affection. In Heymann's cases there was marked improvement, both general and local, and the characteristic symptom diminished or disappeared; but he did not observe change in the bacilli. Frankel, on the other hand, reports a diminution in the bacilli and an alteration in their staining proclivity. They required, in his experience, much longer exposure to the influence of the staining medium than under ordinary conditions. Frankel reports that he was able to trace progressive improvement, and, in some instances, disappearance of several of the more characteristic phenomena of laryngeal tuberculosis, and he thinks the good result was directly the outcome of the action of the remedy on the *bacilli.—Edinburgh Medical Journal.*

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THE INTRAVENOUS INJECTION OF GOAT'S BLOOD SERUM.—Lépine (*La Semaine Médicale*, 25th February, 1891), in discussing this subject, recommends the *intravenous* injection of blood *serum* obtained from the goat by a process which he describes. If the operation be conducted slowly, as much as 80 to 100 c.c. can be introduced without any complaint of oppression or other discomfort. The method can be repeated every second or third day. Lépine is not in a position to say whether the method is likely to prove really serviceable in the treatment of phthisis; but the idea of treating an infectious disease by the transfusion of the blood of an animal which is refractory to the particular disease is an original scientific conception which should be pursued.—*Edinburgh Med. Journal.*

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THE THERAPEUTIC VALUE OF SODIUM IODIDE.—It has been asserted by many that iodide of sodium was an inert substance, or at least that it exerted no medicinal action similar to that of iodide of potassium. Dr. Gingeot, of the Hôpital Saint-Antoine, has made a number of experiments to settle this question, and finds that the drug does possess undoubted therapeutic properties, equal to, if not superior to, those of the potassium salt, in cases of aterio-sclerosis, though it may be less potent in cases of syphilitic disease.—*Med. Rec.*

EFFECT OF QUININE ON THE HEALING OF WOUNDS.—Dr. Sokoloff has published some interesting observations on the effect of quinine administered to a wounded animal on the granulation and cicatrisation of the wound. The experiments were conducted on rabbits. The fur was shaved from a portion of the paw, and an incision made through the skin and into the muscular tissue, the external wound being then sewn up and the whole dressed antiseptically. Subsequently microscopical observations were made on sections including the wound. Twenty-four rabbits which were experimented on in this way were treated with hydrochlorate of quinine, half a grain of which was given per diem for each kilogramme of body weight. A similar number of control rabbits were operated upon in precisely the same manner, but were not given quinine. Dr. Sokoloff gives a detailed description of the microscopical appearances observed each day for eight days in the two sets of cases. The effusion of blood was much the same in both, but there was a marked difference in the condition of the muscular tissue. In the control animals this lost its striped character, the portions in the immediate vicinity of the wound presenting the appearance of an amorphous homogeneous substance containing here and there a few muscular fibres or breaking up into separate pieces as in coagulation necrosis. Besides this, the muscular tissue gradually disappeared, leaving sheaths of sarcolemma either empty or filled with cells. In contrast to this state of things, sections taken from the animals treated with quinine presented little or no sign of muscular degeneration, the fibres preserving their proper structure. With regard to the cellular elements in the control animals, two forms were found in the neighborhood of the wound—a large number of multi-nuclear leucocytes and a much smaller number of large round or oval cells with a single large nucleus. The mean diameters of these cells after three days were 19*m* and 16*m*, after five days 17*m* and 13*m*, and after eight days 18*m* and 15*m*. During this period the nuclei presented various karyokinetic figures. In animals treated with quinine there were no multi-nuclear cells, all being oval, with a single nucleus and smaller than the corresponding cells in the control animals, the mean diameters being after three days 13*m* and 10.5*m*, after five days the same, and after eight days 14*m* and 11*m*. The cells were, moreover, more numerous than in the control observations. In the quinine-treated animals the karyokinetic process commenced and finished earlier than in the others, the chromatin filaments being also less numerous but thicker. Altogether there was less inflammation with quinine than without; in short, without quinine there was Zenker's degeneration, with quinine none—*Lancet.*

"TROPHIC CENTRES IN THE CORD."—Under this title M. Brissaud has contributed an important and suggestive paper, which appears in a recent number of the *Archives de Neurologie.* The paper deals primarily with the subject of alcoholic neuritis, and the subject discussed is whether associated with the changes, which are acknowledged to be present in the peripheral nerves there may not coexist in the spinal cord some change in the cells of the anterior horns of the grey matter. It is not denied that the chief force of the poison seems to expend itself on the peripheral nerves in alcoholic paralysis, as in other forms of toxæmia in which weakness and muscular wasting are observed, such as lead palsy; but the author contends that, as in some of those cases, there certainly are changes in the grey matter of the cord; so, it may be, similar or analogous changes may at times be recognizable in cases of multiple neuritis from alcohol. Changes of this nature have actually been described by d'Oettinger and Korsakoff, and by Finlay and Sharkey, and the author points out the probability of such changes occurring especially when the symptoms of muscular weakness and wasting with localized pain are confined to the region of distribution of a certain nerve or plexus of nerves. And even if changes in the cord are not recognized, it does not follow that they are not present, for it may be that changes do exist which by our present methods are still unrecognizable. A curious fact in this connection is that mentioned by M. Raymond, who produced artificially a slight degree of myelitis in animals, the symptoms of which soon disappeared. When the animals were killed a year or eighteen months later examination could reveal no trace of the original myelitis, but the nerves in connection with the injured segment of the cord were not unfrequently found to have undergone profound alteration.—*Lancet.*

THE
# Canadian Practitioner

A SEMI-MONTHLY REVIEW OF THE PROGRESS OF THE MEDICAL SCIENCES.

*Contributions of various descriptions are invited. We shall be glad to receive from our friends everywhere current medical news of general interest.*

*When a change of address occurs please promptly notify the Publishers,* THE J. E. BRYANT COMPANY (*Limited*), 58 *Bay Street.*

TORONTO, JUNE 1, 1891.

## EDUCATION OF GIRLS.

The methods of modern general education are excellent, but they involve certain perils for our young people. The forcing process is becoming too conspicuous, and the accompanying dangers especially affect girls at certain ages.

Dr. W. W. Potter, of Buffalo, president of the Medical Society of the State of New York during last year, in his anniversary address, took as his subject: "How should girls be educated? A public health problem for mothers, educators, and physicians." The address, which was published in the *New York Medical Journal* and appears in the Transactions of the Society, is replete with words of wisdom respecting this important subject. The author says: "The years between ten and fourteen are full of import to a girl. During them she lays the foundation for future weal or woe. . . Many girls begin their new physiological life at the age of twelve, but if they should not do so quite so early, this is still a period when nature is making preparations for a new existence for the young female, and if her plans are interfered with or thwarted even in their smallest details, years—long suffering years, perhaps of pain, and suffering, and woe—are sacrificed to the shrine of ignorance or wilful neglect."

He then refers to the requirements of ordinary curriculum of American schools for girls, and urges that there are too many hours per day set apart for study. The result is an overtaxation in a large proportion of cases, with more or less disastrous results, which are likely to be permanent in their character. He says: "Mothers should be made to understand that when their daughters begin to complain of headache, backache, and indescribable malaise, these are the warnings which must be heeded. They are the manifestations of nerve-tire, the crying out of the nerve ends for rest, the protest of nature against further continuance of overwork, the danger signal hoisted to warn of the relentless ravages of the approaching tornado; and, further, that, unless they receive a patient hearing and intelligent interpretation during their earlier exhibitions, they will assuredly lead to serious impairing of physicial and mental vigor." The dangers referred to are not peculiar to the United States; they exist to an equal extent in Canada. It is not unusual to find our young girls at a very critical period in their lives taking heavy courses in mathematics, languages, and sciences; and, in addition, practising from one to four hours a day on the piano. We wish that the serious risks involved in such practices were more fully realized by the profession and the public.

## ONTARIO MEDICAL ASSOCIATION.

It is something over ten years since a small number of physicians of Toronto met at the house of Dr. J. E. Graham with a view of establishing a medical association for the Province of Ontario. Arrangements were made to correspond with members of the profession of Hamilton, and, as a result, a committee from the Hamilton Medical Society, composed of Drs. Macdonald, Mullen, Rosebrugh, MacKelcan, and Wolverton, met the Toronto committee in the Rossin House, Toronto, February 22. All the preliminary business was completed at this meeting, and a draft of the proposed constitution and by-laws was drawn up to be submitted to the society for approval at its first meeting.

The first meeting was held in Toronto in the hall of the College of Physicians and Surgeons, June 1 and 2, under the chairmanship of Dr. C. W. Covernton. Our venerable Nestor, Dr. Workman, was elected president, and in thanking the members for the honor conferred upon him, said he was entirely at a loss to know the reason for his selection, unless it had been remembered that he once lectured in midwifery, and it was hence supposed that he was thereby qualified to preside at the birth of the new association.

The meeting was highly successful, there being 127 present. Since that time the Association has steadily grown from year to year, and now it is undoubtedly the strongest society we have in Canada. The meeting this year, which will be held June 3 and 4, promises to equal or surpass any of its predecessors.

## THE MEDICAL COUNCIL CURRICULUM.

The committee to consider this subject has held some meetings, and will probably bring in a complete report at the June meeting of the Council. In our last issue we referred to the fact that much information had been received respecting the courses in foreign Universities. Expressions of opinion have been received from the various medical teaching bodies of Ontario, and from McGill, of Montreal.

We are pleased to find that a general interest has been awakened in this direction, and a general desire has been shown to keep this province well to the front, as far as medical education is concerned. The members of the committee have evinced a determination to investigate the subject very fully, and deserve much credit for their zeal, apart from any consideration of the conclusions arrived at.

# Meeting of Medical Societies.

## PATHOLOGICAL SOCIETY OF TORONTO.

December 18th, 1890.

The Society met in the Biological Department, the President, Dr. J. E. Graham, in the chair.

A large number of visitors were present, on the invitation of the Council, to hear the paper of Honorary Member Dr. A. R. Robinson, of New York, on

PSOROSPERMOSE FOLLICULAIRE VÉGÉTANTE,

(published on page of 245 THE CANADIAN PRACTITIONER.)

In the discussion which followed, Dr. A. B. Macallum said:

In Paget's disease of the nipple, as well as in epitheliomata, there are structures which are of great interest in the settlement of the problem of the pathology of the disease. Similar structures are, as Dr. Robinson has just demonstrated, present in keratosis follicularis. The nature of these structures has now become a matter of discussion amongst pathologists, some maintaining that they are parasitic; others, that as the tissues in which they are found are pathological, it is not surprising that the latter produce abnormal elements. One observer considers them to be endogenously formed cells. In regard to the latter theory, it may be stated that there is no well authenticated observation of the occurrence of endogenous cell-formation, as pathologists understand the phrase, in the animal and vegetable kingdom. The conditions under which life has existed and does exist on the globe are so varied that, if cell life is capable of reproduction in this fashion, numerous instances would be at hand for exemplification. If we grant that in neoplasms there is but an exaggeration of the elements of the normal tissue growths, and if we admit that in normal cells and tissues there are no endogenously formed cells, we must be prepared to reject this explanation of the origin of the structures found in epitheliomata, Paget's disease of the nipple, and in keratosis follicularis. My own view as to the origin of these structures is divided between the two explanations:

(1) That they are parasitic (sporozoa).

(2) That they are leucocytes.

Against the first explanation, it has been urged again and again that the structures cannot be sporozoa because they do not manifest the mode of reproduction and other points in the sporozoon best known, viz., *Coccidium oviforme* of the rabbit. This objection indicates, I think, a rather inexact acquaintance with the characters of the sporozoa; the occurrence of sickle-shaped spores, which one objector urged as the test in this case, being only found in some forms, while our present knowledge of the characters of the class demonstrates that there is a great diversity in the form of the reproductive elements, and even in the mode of reproduction. At present the characters of this division of the protozoa are too little known, and therefore we are not in a position to determine the exclusion from it of forms which may after all be only aberrant examples of the class.

It seems to me that definite decision cannot be given between the two views. Whether they are leucocytes or not, one may say with some certainty that they are parasitic. In the nipple in Paget's disease the organisms are large, often greatly exceeding in size the original epithelial cell, and they frequently present all the details of structure found in a vigorous cell. If they are leucocytes, then they are out of place in the interior of the epithelial cell; and as they must thrive at the expense of the cell and irritate the latter, they are parasitic. When an epithelial cell is so irritated, its disturbed metabolism must affect the neighboring epithelial cells. An inflammation of a chronic character arises, and if the endocytes are of leucocytic origin, examples of them are multiplied and the area of their distribution increased. That leucocytes penetrate other cells is shown by observations on the livers of patients affected with acute yellow atrophy or pernicious anæmia, etc., and in acute atrophy they give rise, apparently, to structures which are as large as they are in the nipple in Paget's disease. One can readily imagine that in a struggle between a vigorous epithelial cell and a vigorous leucocyte contained within it the victory is not always on one side, and yet there is one constant result: the nutrition of the part is disturbed. This, of course, touches on the question why epithelial cells become so pathologically vigorous as to give rise to neoplasms, but I do not intend to deal with this just now. Why, on the other hand, vigorous epithelial cells should permit the entrance of leucocytes, and under what conditions, is a question which I cannot answer; but vigorous cells do permit the penetration of parasitic elements, as shown by observations on the life history of various sporozoa.

Dr. John Caven said that he had not had an opportunity of studying cases of keratosis such as were spoken of by Dr. Robinson, and could therefore offer no opinion with regard to the psorosperm origin of that disease. He had, however, during the last two years, been making a special study of cancers of all varieties, and particularly squamous epitheliomata, for the purpose of satisfying himself as to their causation. The conclusion he had reached was that so far there is nothing like definite or even probable proof of the presence of such organisms in carcinomata. That there are bodies present, particularly in epitheliomata, which differ greatly from ordinary epithelial cells, both in appearance and in reaction with staining reagents, of course cannot be denied. These, the speaker at present thinks, to be modified epithelial cells. Certain other elements have been pointed out which, to a certain extent, resemble the so-called psorosperms of Darier. These, the speaker thinks, to be leucocytes. Their position in the centre of the masses of epithelial cells shows that they are not the *cause* of irritation and proliferation. Their absence from the neighborhood of blood or lymph vessels is readily explained by their power of amœboid movement and the fact that minute channels can be seen, in which they are sometimes lodged, between the periphery of the cell masses and the central corneous nest of cells in relation to which the organisms are most commonly collected. The fact that when these so-called organisms are most abundantly present the corneous central masses are always more or less destroyed, points to a *phagocytic* action rather than *parasitic*. Then it is to be noted that very often these cells are multinucleated, just as the supposed *destructive* leucocytes should be. Lastly, that leucocytes enter and destroy epithelial cells in new growths, the speaker can demonstrate from his preparations.

Dr. Robinson replied.

CIRRHOTIC LIVER.

Dr. J. E. Graham presented a specimen from a patient in the Toronto General Hospital. A barber, æt. 38; no previous history of disease before his admission, but no satisfactory history could be obtained. As far as could be made out, he was fairly well until ten days before coming to the Hospital. Then he had pain in the head and back, chills and fever, and had been in bed for some days. On his admission he presented the typical appearance of a typhoid fever patient: tongue coated, temperature 102° F., pulse 90, respirations 20. Marked tympanites, tenderness in the right iliac fossa, and very much enlarged spleen. On the back there were two or three typical typhoid spots near the spine. On the second or third day after his admission he had an intestinal hemor

rhage, which, strange to say, did not reduce his temperature. After five days he had a hemorrhage from the stomach, and died in an hour or so. The hæmatemesis was suggestive of something besides typhoid. At the autopsy there was found no evidence of typhoid fever in Peyer's patches, but there was marked cirrhosis of the liver.

Dr. John Caven reported further that the spleen on fresh section was typical of cirrhotic induration, and weighed 19 oz. There were no bacilli found. A small abscess was found in the mesentery, close to the cæcum, which was at first thought to be due to appendicitis, but the appendix was healthy, and further investigation showed the abscess to be due to a suppurating mesenteric gland. The gall bladder was of the size of an ordinary kidney, and contained pus. The fever in this case was probably the result of the suppurative process in the gall bladder.

Dr. McPhedran remarked that these profuse hemorrhages were often due to a varicose condition of the veins of the œsophagus.

Dr. Nevitt said that he had seen a specimen of the kind referred to by Dr. McPhedran. The exhibitor of the specimen stated that a blow-pipe was necessary to demonstrate the dilated veins *post mortem*.

Dr. Caven had not examined the veins of the œsophagus.

### NECROSIS OF THE FEMUR.

Dr. Ferguson exhibited a specimen of necrosis of about two inches of the entire diameter of the shaft of the femur. The dead bone was removed, and perfect recovery took place without deformity.

### SARCOMA OF THE ORBIT.

Dr. R. A. Reeve presented a specimen from a man, æt. 48, who had suffered from symptoms of blindness of the right eye for three months. Three months later there was detachment of the retina and intense pain. The eye was enucleated because he was sure of the existence of a tumor, and he thought the detachment of the retina was due to sarcoma of the choroid. The enucleation was as complete as possible, and the wound healed. The specimen was not kept, but was examined at the time, and a melanotic tumor was found occupying one-third of the vitreous chamber.

In October, 1890, he saw the same patient, who had then a pigmented tumor of the orbit, the contents of which were eviscerated and zinc chloride applied. The case was of interest from the length of time between the appearance of the first and second tumors. He did not consider it a case of melanotic sarcoma. Melanotic sarcomas are the most malignant of tumors. Sometimes the tumor is encapsuled and can be removed in the early stage in its entirety. If in the first instance he had failed to remove all the growth, it would have recurred earlier. This, however, did not return for fifteen years, and therefore it was not a true case of recurrence. Possibly the elements of the disease lay quiescent in the deep part of the orbit, apart from the original tumor. He suggested that possibly the artificial eye that had been worn constantly for fifteen years had acted as an irritant and produced the second tumor.

Photographs were exhibited showing the different stages of the disease.

Dr. John Caven stated that the second tumor was a mixed, round, and spindle-cell sarcoma.

The meeting then adjourned.

Jan. 31st, 1891.

The Society met in the Biological Building, the President, Dr. J. E. Graham, in the chair.

Dr. Oldright presented

(1) PATENT DUCTUS ARTERIOSUS

from a girl, æt. 20. Seen last September, was somewhat anæmic, with œdema of the feet, and albumin in the urine; no heart murmur. After four weeks in bed she had a right hemiplegic seizure; no facial paralysis. This passed off and she died the week after. Towards the end there were some purpuric spots on the face and hands. The autopsy showed a patent ductus arteriosus, with vegetations on the pulmonary side of the opening of the duct; also some atheroma of the pulmonary valves. The liver was slightly fatty, the spleen fully six times the normal size, and the vermiform appendix contained some hard fæcal concretions.

Dr. McPhedran, who saw the case, had thought it was hysterical from the symptoms manifested. The heart was fairly normal as far

as he could remember, and the liver was somewhat enlarged. He could not say what was the cause of death.

Dr. Peters thought it peculiar that the only abnormality should have been the patent ductus arteriosus; there was no other deformity. The prevailing current had been in the direction of the pulmonary artery. He thought, however, that no murmur was heard in connection with the second sound because of the vegetations on the aortic valves. He had a case under his care in which he had diagnosed five separate murmurs, one of which he thought to be due to a patent arterial duct. He would say the aorta in this case of Dr. Oldright's was fatty rather than atheromatous.

Dr. McPhedran asked what was the general experience as to the occurrence of aortic lesions in children.

Dr. Peters remarked further, in reference to the hemiplegia, that it was probably from an embolus derived from the vegetations on the aortic valves, rather than from the pulmonary, and the hemiplegia would be on the opposite side if from the pulmonary artery.

Dr. Oldright replied.

### (2) TRAUMATIC PERFORATION OF THE INTESTINE.

The man was said to have been kicked on the belly; he walked home after the injury, and subsequently developed symptoms of peritonitis. An operation was thought advisable, but he suddenly became collapsed and died thirty-six hours after receiving the injury. A *post mortem* examination revealed injection of the peritoneum, intestines glued together, deposits of lymph and a large quantity of pus in the peritoneal cavity. On the ileum, six or seven inches from the cæcum, was found a rupture seven-eighths of an inch in length on the anterior aspect of the gut. He asked how soon pus could form in such a case.

Dr. Peters said that depended on the definition of pus; if it means leucocytes in a serous fluid, then it might form immediately after an injury.

### (3) EPULIS.

From a woman who presented herself with a slight tumor just posterior to the left lower canine. The trouble began last spring with aching of the teeth. She had some teeth drawn, but the growth increased in size. He removed the growth with part of the alveolar margin of the jaw, cutting well clear of the growth.

Dr. J. Caven found it to be a mycloid sarcoma, giant cells in a spindle-cell matrix, and containing processes of bone.

Dr. Peters said that the practice now is to thoroughly remove the growth, but not necessarily any of the bone from which it grows.

### (4) MILKY-LOOKING FLUID FROM A CYST OVER THE OLECRANON.

This was removed from a man, æt. 63, who had been suffering from rheumatism. Over the olecranon there was a flat ovoid body which felt like a flat exostosis, or fibrous tumor. The nature of the fluid had not been determined, except that it was not pus. He thought the crystals it contained were probably lime salts.

Several of the members, on examining it microscopically, decided that the crystals were leucin and tyrosin.

### ULCERATIVE ENDOCARDITIS.

Dr. L. F. Barker presented a specimen and read the history of a case of ulcerative endocarditis (see page 253 of THE CANADIAN PRACTITIONER).

Dr. Ferguson narrated the case of a man, æt. 23, apparently in good health, who in playing foot-ball got greatly overheated. Two days afterwards there was swelling in the right knee, and, in two days more, pulmonary consolidation with pleuritic effusion. The knee suppurated, and patient died. The autopsy showed marked ulcerative endocarditis. Probably the origin of the condition was the over-exertion.

Dr. J. Caven said, if recent researches are to be borne out, it would appear that all the conditions might be secondary to leukæmia, as bacteria can be found in that disease, and Dr. Cameron, of Montreal, has shown that leukæmia is transmissible.

Dr. McPhedran, referring to the condition of the blood, said it was typically leucocythæmic, the proportion being 5 to 1. Yet the spleen did not present the amount of enlargement we would have expected. We may take the view that the lung lesion was the primary one and the endocarditis secondary, but the other view re-

garding the heart lesion was supported by the fact that it appeared older than it would have been had Dr. Barker's view been the correct one. He thought Dr. Ferguson's case was peculiar in that there was such an amount of pus in the pleura so early; he had never met with such a condition. The existence of leukæmia could not be determined in a single examination of the blood.

Dr. Graham thought Dr. Ferguson's case might be explained as septic trouble in a case of old heart lesion.

Dr. J. Caven said the theory had been advanced that in malignant endocarditis some heart lesion must always have preceded.

Dr. Acheson asked if it was not a general fact that in diseases due to micro-organisms there must always be some lesion of the surface to enable the organisms to effect an entrance; otherwise there will be no infection, as in the case of diphtheria, where some abrasion of the mucous membrane of the pharynx was always antecedent to the development of the disease.

Dr. Barker replied, and said that the case might be explained as one of general infection resulting in a simultaneous endocarditis, pneumonia, etc.

HEAD OF A FEMUR REMOVED FOR TUBERCULAR DISEASE.

Dr. Cameron presented this specimen. The patient suffered from hip-joint disease for some years. The head of the bone was excised through an anterior incision between the sartorious and the tensor fossæ femoris. There is seen to be disease in the cancellous tissue of the bone, and some erosion of the cartilage.

CARD SPECIMENS EXHIBITED.

Dr. Cameron—Three ovarian cysts.

Dr. Scadding—Ovaries removed for oophoralgia.

MICROSCOPIC SPECIMENS.

Dr. Acheson — Epithelioma (rodent ulcer) from the skin of the temple, removed by Dr. Nevitt.

Dr. Barker—Liver and kidney from his case of ulcerative endocarditis.

Dr. J. Caven—Mycloid sarcoma. Dr. Oldright's case.

The Society then adjourned.

## Reviews.

*The Pocket Materia Medica and Therapeutics; a Résumé of the Action and Doses of all Officinal and Non-officinal Drugs now in Common Use.* By C. Henri Leonard, A.M., M.D., Professor of Medical and Surgical Diseases of Women and Clinical Gynæcology in the Detroit College of Medicine. Cloth, 12 mo., 300 pages; price, postpaid, $1. Detroit: The Illustrated Medical Journal Company, Publishers.

The drugs of as late introduction as 1891 are to be found in this volume. The author claims to have incorporated everything of merit, whether officinal or non-officinal, that could be found either in standard works or from many manufacturers' catalogues.

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*Diseases of the Digestive Organs in Infancy and Childhood.* By Louis Starr, M.D., late Clinical Professor of the Diseases of Children in the Hospital of the University of Pennsylvania. Philadelphia: P. Blakiston, Son & Co.

A second edition of this work is now issued, with the addition of a section on alterations in the odor of the breath in disease; a section on urine alterations; a chapter on massage in pædiatrics; and a detailed account of second dentition and its influence on the health in late childhood. Good wine needs no bush; this book needs no praise.

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*A Manual of the Practice of Medicine.* By Frederick Taylor, M.D., F.R.C.P., Physician to and Lecturer on Medicine at Guy's Hospital. Philadelphia: P. Blakiston, Son & Co.

Any book, issuing from the school which has produced such medical classics as the works of Wilks, Moxon, and Hilton Fagge, raises great anticipations. These anticipations are fully realized, for Dr. Taylor has produced a work, less ambitious, but not less valuable than those of his predecessors. He has endeavored to offer a short yet complete account of the present state of medical practice, devoting special attention to the description of symptoms, to diagnosis, to prognosis, and to treatment. But seldom will there be found, in so little space, an account of the protean aspects of disease so complete, so trustworthy, and so stamped with the impress of personal experience and conviction.

*Diabetes, its Causes, Symptoms, and Treatment.* By Charles W. Purdy, M.D. Philadelphia: F. A. Davis, Publisher.

The observations, experimental and clinical, made upon diabetes have been so many that the busy practitioner has neither the leisure nor the opportunity to make himself acquainted with them. Although the disease is not an everyday thing, still it occurs sufficiently often and in such marked forms as to render an accurate knowledge of it essential. The author, having thoroughly sifted all the facts known concerning diabetes, presents them in a logical and concise form, illustrated by the history of cases. The directions as to the treatment, medicinal and dietetic, are very complete. With a diabetic patient directions as to the bread to be eaten are always given, and some certain brand of flour recommended. Dr. Purdy has done well to give the analysis of these so-called diabetic flours. One, made in Watertown, N.Y., and largely advertised in this city, is stated by him to contain 67.17 per cent. of starch.

## Pamphlets and Reprints.

*Wood's Medical and Surgical Monograph* for March contains: The Modern Diagnosis of Diseases of the Stomach, by J. M. Purser, M.D., Dublin; Unsoundness of Mind in its Legal and Medical Considerations, by J. H. Williams, London; Baldness and Grayness, their Etiology, Pathology, and Treatment, by Tom Robinson, M.D., London.

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*The Dangers Arising from Syphilis in the Practice of Dentistry*, by L. Duncan Bulkeley, M.D.

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*The Thermometer in Obstetrics and Gynæcology.* By A. D. Leith Napier, M.D., F.R.S. Ed., Member of the Royal College of Physicians, London, etc. London: H. K. Lewis, 136 Gower Street.

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*Crime and Responsibility.* By Daniel Clark, M.D., Medical Superintendent Asylum for Insane, Toronto; Professor of Psychology, University of Toronto, etc. Reprinted from *American Journal of Insanity.*

*The Prevention of Tuberculosis.* An address delivered at the American Public Health Association, Charleston, S.C., Dec. 16th, 1890, by Lawrence F. Flick, M.D., of Philadelphia. Reprinted from the *Sanitarian* for February, 1891.

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*Surgical Relief for Biliary Obstruction.* By Henry O. Marcy, A.M., M.D., L.L.D., of Boston, Surgeon to the Hospital for Women, Cambridge, etc. Read in the Section of Surgery and Anatomy, at the forty-first Annual Meeting of the American Medical Association, held at Nashville, Tenn., May, 1890. Reprinted from the *Journal of the American Medical Association*, December 20th, 1890.

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*The Influence of Climate in the United States Over Bright's Disease.* Reprinted from the *New York Medical Journal.*

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*Examination of the Urine for Life Insurance.* A lecture delivered at the opening of the new building of the Chicago Post-Graduate Medical School, Jan. 7th, 1891, by Charles W. Purdy, M.D., Professor of Urinary and Renal Diseases at the Chicago Post-Graduate School, etc. Reprinted from the *New York Medical Journal.*

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*Certain Causes of Major Pelvic Troubles Traceable to Minor Gynæcology.* Read before the Philadelphia County Medical Society, and reprinted from its Transactions

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*A Retrospect of Abdominal Surgery.* Reprinted from the *Medical News.*

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*Cleanliness in Maternities.* Reprinted from the *Medical and Surgical Reporter.*

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*Ectopic Pregnancy and Puerperal Peritonitis.* By Joseph Price, M.D., Physician to the Preston Retreat, etc., Philadelphia.

## Personal.

DR. WM. H. HINGSTON, of Montreal, received the honorary degree of LL.D. from the University of Victoria College, at the regular meeting of Convocation, May 13.

DR. ARTHUR JUKES JOHNSON, the representative of the Midland and York division in the Ontario Medical Council, has written to his constituents asking for their wishes and opinions with reference to subjects likely to be discussed at the coming annual meeting.

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DR. W. H. ELLIS, professor of applied chemistry in the Medical Faculty of the University of Toronto, has gone to Europe.

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DR. CHARLES W. DULLES has resigned the editorship of the *Medical and Surgical Reporter*, and been succeeded by Dr. Edward T. Reichert, professor of physiology in the University of Pennsylvania.

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DR. A. O. HASTINGS sailed from New York for England, May 13th.

## Therapeutic Notes.

POWDER FOR ACUTE ECZEMA.—*La Semaine Médical* gives the following prescription of Alexinski for this condition:

| | | |
|---|---|---|
| ℞.—Oxide of zinc | . . . . | 15 grains. |
| Subnitrate of bismuth | . | 30 " |
| Powdered starch | . . . | 1½ drs. |
| Powdered lycopodium | . | 1½ drs. |

This powder is to be dusted over the parts which are affected, night and morning.—*Med. News.*

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LOCAL ANÆSTHESIA IN SMALL OPERATIONS.—Dobisch recommends to spray the skin with Richardson's apparatus for about a minute with the following mixture, if the operation is not to last more than from two to six minutes:

| | | |
|---|---|---|
| ℞.—Chloroformi, | . . | 10.0 |
| Ætheris, | . . . | 15.0 |
| Menthol, | . . . | 1.0 |

—*Edin. Med. Jour.*

## Miscellaneous.

MEDICINE is fairly well represented in our legislative assemblies. There are 21 physicians in the Dominion Parliament and 11 in the Ontario Legislature.

A TREATMENT OF EPISTAXIS.—Mr. Jonathan Hutchinson has made a note in his *Archives of Surgery* of a treatment of epistaxis which, he avers, has never failed of success in his hands, and he has had many very rebellious cases. It consists in plunging the patient's feet and hands into water as hot as can be borne.—*New York Medical Journal.*

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ONE of our practical country practitioners from one of the upper counties in this State was recently on a visit to New York, and, among the other wonders of Gotham, took in one of the gynecological clinics. It was one of the professor's field days, and, at the conclusion of a brilliant clinic, he asked Dr. F., "what he thought of medical matters in the metropolis?" Dr. F. replied: "Well, I would rather be a moonshiner down in Tennessee than a uterus up here in the hands of you New York doctors."—*Southern Practitioner.*

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TO ABORT A BOIL.—The ointment of the nitrate of mercury is said to be an excellent application in the case of a commencing boil or felon, its early use in most cases sufficing to prevent the formation of the furuncle.

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THE ordinary obstetric fee in some parts of China is, among the better classes, two dollars when a male child is delivered, one dollar for a female. Among the poorer classes the fee is one dollar for a boy and fifty cents for a girl.

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A LARGE addition will be made to the College of Pharmacy, Toronto, at a cost of about $12,000.