of the choroid; exudations between the retina and choroid, or into the substance of the latter, will have a similar effect. Should the retina become detached from the choroid by serous effusion, the retina is then pushed forwards towards the lens; the ophthalmoscope will detect its existence, and affirm its extent with certainty. Whenever the retina or the entrance of the optic nerve exhibits great brilliancy, partaking of a bluish glittering, we may of a certainty say serous infiltration has taken place, and such cases are very difficult to treat. The periphery of the optic nerve, being a fixed point, prevents the further extension of the effusion, and the infiltrated or detached parts become raised around, and apparently hang over it; the raised portion has a slight reddish appearance, and is sufficiently transparent to permit of our seeing the choroid through it. On several occasions I have noticed, as a diagnostic of anæmia, a mass of pigment deposited and exposed around some portion of the optic nerve, generally at its periphery; or large masses are collected together as fixed black spots upon an anæmic choroid.

FIG. 3.—*Left Eye.*

Partial insensibility of retina, with exposed patches throughout choroid.

The presence of quite white spaces in the choroid is worthy of notice, and appears to indicate in such spots the obliteration or bloodlessness of the choroid; a general pallor of the whole interior, and especially of the optic nerve, which appears larger than in the normal eye, is an accompaniment of such a change.*

Post-mortem examinations have proved that a very white and dilated appearance of the optic nerve may be regarded as a sign of fibrous degeneration of the papilla optica. Gräfe has shown this, and gives a very interesting case examined by him:—"In a man who had been blind for some years, but without showing signs of cerebral disease, the ophthalmoscope showed a tendinous white papilla, and very delicate central vessels. Death was caused by pulmonary consumption. The post-mortem showed structural change of the thalami and corpora striata. The optic nerves were atrophied, dark grey, and gelatinous, until they reached the chiasma, but from this point they degenerated into dense white fibrous cords; the papilla also consisted of tendinous tissue. Only here and there a few nerve-fibres were observed. The retina could not be satisfactorily examined on account of the advanced state of decomposition."†

Gräfe in the same paper directs particular attention to the detachment of the retina from the choroid by extravasation or exudation, as well as by exudation of plastic lymph, by the production of tubercular disease, and by cancerous growths. Donders has carefully analyzed and represented colloid degeneration of the pigmentary cells of the choroid, a form of disease not yet made out in this country with the instrument. Congestion of the choroid (choroiditis), and, indeed, anæmia of this structure, frequently met with, always exhibit a peculiar train of subjective symptoms, so that it is to be hoped by more careful examinations the organic changes will be readily recognised, and this disease never mistaken or mistreated. At all events, in the very often uncertain indications of external

symptoms, we have now the certainty of not mistaking an anæmic for a congested condition of the choroid and other internal tissues, and the ophthalmoscope, like the stethoscope, will enable us to determine the amount of impairment of vision in the patient's eye, without its being necessary to ask of what he complains. A few words before we conclude will be sufficient to indicate the treatment adopted in the cases that have fallen under my care, although the recital of special cases will be a better guide.

In a disease arising from so many causes, I may here state, generally, that the larger number of cases which have fallen under my observation are those either in the *incipient* or *incomplete*, or in the *confirmed* or *complete*, stages of amaurotic disease. My first care has been to discover the cause, and treat that especially, persisting for a long time in my remedies. Amongst the poor, the general health seems to demand our first care; and as the greater number of patients present themselves badly fed, and in a low condition of health, it follows that my remedies have been chiefly directed to the removal of this state; at the same time, I have seen considerable benefit derived from a mild mercurial course, combined with tonics, such as minute doses of the biniodide of mercury, with bark and other bitters. This, persevered in, has, in my hands, been attended with a greater amount of success than any other plan of treatment.

(To be continued.)

ON TÆNIA:

SOME MODES OF ITS PROPAGATION AND TREATMENT.

By W. HUGHES WILLSHIRE, M.D.,

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(Concluded from p. 449.)

IN reference to the *treatment* of tapeworm, I would first remark, that strict inquiry must be made relative to the diet of the patient. In doing so, it is most essential, first, to insist upon the perfect cookery of all animal food consumed; secondly, the avoidance of the frequent use of the flesh of the pig; and, thirdly, the rather full admixture of condiments, such as salt, pepper, mustard, spices, &c., with the general diet. It is known to me from experience, that a person frequently troubled with intestinal entozoa ceased to be so when he continued occasionally taking good curry for his dinner; and I need scarcely do more than recall to mind the asserted effects of the criminal law of those countries which forbid the least admixture of salt with the diet of the felon, and who thus, in addition to his other punishment, suffered the torture of parasitic entozoa.

Attention may also be directed to the fact of the *Bothriocephalus latus* being, according to Huss and Wretholm, quite endemic on the shores at the head of the Gulf of Bothnia from Tornea to Pitea, as likewise to the not improbable opinion of Waldenström and others, that the propagation of this human entozoon has some specific relations to ichthyophagic habits. Now, the water of the Baltic in general, and that of the Gulf of Bothnia in particular, are characterized by their small amount of saline constituents. Three pounds of water taken from the North Sea, contain 747 grains of salt; but the same quantity taken in winter from the Baltic, does not yield more than 389 grains, whilst in summer it is probable that not more than half this quantity even could be obtained from the water of its Bothnian part. Further, it is remarkable that where this parasite occurs inland, it does so in such a country as Switzerland—a place with numerous fresh-water lakes. It may therefore be presumed, as a late writer in the "Medico-Chirurgical Review" has remarked, that a fresh-water fish, or at least a fresh-water marine animal, will afterwards be found to be the matrix of one of this entozoon's previous stages of development.

The value of these and of other condimentary agents, as pro-

* Can this condition be in any way connected with the fact that such patients often see better in a dull light, or towards twilight in the evening? We know that in some nocturnal animals, which hunt their prey towards or during the night, the choroid is destitute of pigment, or rather it is covered with white pigment in place of black, and this appears of service by increasing the action of the luminous rays upon the retina.

† Gräfe, Archiv, ii, p. 285.

phylactics against the production of intestinal entozoa generally, is to be explained, I believe, by their helping to maintain the tone of the alimentary canal and its functions under circumstances which would otherwise depress them to that point which is one of the most favourable conditions for assisting the progressive metamorphosis of intestinal parasites. These circumstances, amongst others, are low, damp, malarious residences, diminished intensity of the solar light, and great uniformity of insipid diet, &c. &c. Dr. Copland remarks, when alluding to certain forms of tropical vegetation, "The low grounds on which these are produced abound with deleterious miasms, and the stagnant water which there often serves for the necessities of life contains the ova of insects and animalculæ. While the former occasions ague and remittents, the latter gives rise to disease of the digestive canal and to the generation of worms.....In the above localities grow the different species of the *capsicum*—the principal condiment employed by the natives, and these are also the chief prophylactics and remedies for their constitutions against the diseases now alluded to."* These views, in part, I should support, as they explain the free use of "peppers," as they are called, (the large pickled pod of the *capsicum*;) in some warm localities. I have myself witnessed children on the coast of Africa consume these fiery fruits with the utmost *gusto*, and which practice appeared to me, before I was initiated, but an unwitting experiment to take the skin off their mouth. In spite of all prophylactic care, however, tænia will prevail, and the question, then, is, how to expel the entozoon with most surety, celerity, and with least inconvenience to the patient. This has long been a question for consideration, even from the days of Dioscorides, and concerning which the public as well as the profession have alike busied themselves. The result has been that a legion of particular drugs and pharmaceuticals have at various times been proposed, and for a time each has been regarded as the remedy *par excellence*. To allude to them is quite unnecessary, except to call to mind those which in very modern times have been regarded most favourably. These have been, the rectified oil distilled from turpentine, the decoction of the root of the *Punica granata* or pomegranate, and the infusion of the flowers of the *Brayeria anthelmintica*, or Abyssinian Kosso. That all three are useful there cannot be a doubt; but the first occasionally produces irritant symptoms referable to the urino-genitary and nervous apparatus, particularly in full habits and plethoric people; the second is not always readily procurable in a sufficiently fresh condition for use; and the third has to be taken in a repulsively-bulky amount, at one time was exceedingly dear, and is always liable to being either stale or adulterated. Valuable, too, as these vermifuges are, there yet hangs about their use a considerable degree of uncertainty; so that to possess an agent less nauseous and irritant than turpentine, more sure than pomegranate, and less bulky and less expensive than Kosso, is no doubt a great advantage. That we do possess such a drug, I am decidedly of opinion, as also that the three favourites I have just named will be gradually, but surely, displaced by it, except in out-of-the-way and country places, where a command of drugs is not at hand, and where *turpentine*, of course, will continue to be employed. The drug to which I allude is an oleo-resin prepared from the root-stock and frond bases of the *Lastrea filix mas*, or male fern. The plant itself is, indeed, no new member of the *materia medica*, as even Theophrastus, Dioscorides, Pliny, and Galen, and old Gerhard, Andry and Marchant, in later days, have commended it. But from its having been used "in the rough," as it were, from spoiled, useless, or inert samples having been employed, and from its being often combined with other agents, it got, on the one hand, to be neglected as uncertain, and on the other hand, to be considered as having obtained a credit really due to the other ingredients by which a dose of it had been followed, or with which it had been combined.

In 1776, however, Madame Nuffer, (the widow of a Swiss surgeon,) of Murten, in Switzerland, obtained great repute from possessing a secret remedy for the ejection of tapeworm. The secret was at length purchased by the King of France for between £700 and £800 of our money; and when it was afterwards made public, it appeared that in rather a complex piece of preparation and purgation the powder of the male fern root was the *pièce de resistance*. Once more the fame of the remedy arose, but only, as it happened, to be again silenced, for after some considerable failures, it was deemed of uncertain value, and what virtue the method did possess was regarded as rather due to the mixture of calomel, gamboge, and scammony, by which the dose of fern root was followed, and which mixture

had long been considered a powerful vermifuge, having received the significant title of the *pulvis trium diabolorum*, or the powder of the three devils!

Though having thus lost its *prestige*, practitioners remembered that this agent, "fern root," had been famous from the earlier days of medicine, that Madame Nuffer's remedy proved undoubtedly very frequently successful, and that hence the failures with it were perhaps due to untoward circumstances, capable of being, though not yet guarded against. At length a physician of Geneva, M. Peschier, to ensure as much certainty and concentration of strength as possible, prepared an "oleo-resin of male fern" by digesting the frond buds in sulphuric ether. This was used successively by the producer, by Hufeland, Ebers, Radius, Schönemann, Salzmann, Tott, Fosbrooke, and others, and the collective judgment was, that this oleo-resin exceeded all other anthelmintics in rapidity, in certainty, and in comfort to the patient. Radius, however, still thought that the *head* of the worm was more surely to be found after the employment of pomegranate; Bremser regarded it as a successful agent against the tænia (*Bothriocephalus*) lata, but not against tænia solium; whilst Mayor asserted the tænia lata to be expelled by the oleo-resin, but that tænia solium only yielded to the most fresh powdered fern root. From 1833 to 1835, attention was strongly directed to the value of this oleo-resin, in our own country, by Dr. Christison and Dr. Fosbrooke; but even as late as 1850, Dr. Pereira continued to write: "Numerous testimonies of its efficacy have been published. I have tried it in several cases of tapeworm, but without success." It was not until about five or six years back, when renewed accounts of its power and trustworthiness were published in some Edinburgh journals, that it became introduced into more general employment. Since then, Drs. Christison and Gull, in particular, have amply illustrated the power and trustworthiness of the drug. According to the former, his "experience of the male shield fern corresponds precisely with the much more extended observations of Peschier, at Geneva, more than a quarter of a century ago;" whilst the latter states that the drug had been given in nearly 200 cases of tapeworm at Guy's Hospital, and that it was esteemed as the most convenient and effective remedy we have hitherto had. In confirmation of these encomiums, I can say, that having employed it since 1853, I have found it to be, on the whole, by far the most available of all the remedies proposed against tænia. It may be given to very young children; I have given it in half-drachm doses to a child of four years of age; whilst Dr. Gull has prescribed it to a boy two years old in doses of a drachm and a half, without injurious effects. I have not myself given it to a pregnant woman, as, according to Salzmann, it possesses emmenagogue effects; how far this is the case, I know not, however. I generally order the "oleo-resin" in drachm doses, with an equal amount of sulphuric ether rubbed up with an ounce of mucilage. This is taken at five or six in the morning, on an empty stomach, and is followed, in about five hours, by an ounce of castor oil. The introducer (Peschier) regarded half a drachm of the oleo-resin as equal to three drachms of the "powder" in effect. I have generally found that in about four or five hours after the first dose the worm has been expelled, just before the time, indeed, when the castor oil is about to be taken. I have, however, known the "oleo-resin" to expel the worm within one hour after its reception into the stomach, and I have also known it to remain (in the case of a girl thirteen years of age) for a day and a half before operating, then to produce a motion, in which the worm was expelled. This girl made no complaint during the interval. Sometimes sickness is complained of, often not, as is also the case as respects the nauseousness of the drug. The latter does not seem to be endowed with any great amount of purgative power; frequently only one motion would be produced, were it not for the following dose of castor oil. The true value of the oleo-resin appears in its killing and dislodging power over the cestoid entozoon, its effects on the supporting organism being very slight comparatively.

The great test, of course, of the virtue of a drug against tænia is the fact of the *head* (or at any rate what is called the head) of the worm being expelled by it; for if this is not effected, however long may be the part expelled, reproduction of an entire length will soon again recur. But the difficulty is to know whether the complete expulsion has really taken place? The mere fact of a patient at an hospital not being able to produce the head is no proof it has not been eliminated, even after he has been told how to manage to look for it, and after it has been carefully described to him, so that he may know it when he sees it. If I were to judge of the value of the oleo-resin of the fern merely from the number of heads

* "Climate," in *Cyclo.*, section 30.

I have had brought to me after its employment, I certainly could form no very exalted opinion of its virtues. But judging from the constant ejection of a lengthened piece, the close approach made to the head, as shown by the very narrow portion which is usually presented to me, and the story told by the patients as to their mode of search and discovery, I am led to think that the head is far more frequently dislodged and ejected than might be otherwise supposed. Further, it should be borne in mind that where the patients have been under the immediate observation of the physician as in-patients instead of as out-patients of an hospital, and where the nurse has been rewarded for her trouble in procuring the delicate filiform termination, it has been far more surely produced. "In eight out of twenty cases," says Dr. Gull, "it has been brought; in six of these under care in the hospital, the nurse was offered a premium for every head she found, and four out of the six were so obtained." After the expulsion of the worm I generally put the patient upon a course of the tincture of the sesquichloride of iron in infusion of quassia.

The identification of the particular plant thus serviceable from time immemorial unto the present in dislodging "*tænia*" will be obtained by bearing in mind its various synonymical designations. It is the *πτέρις* of Theophrastus and of Dioscorides, and of the modern Greek Pharmacopœia of 1837, and also of Pliny; the *βληκνον* and *πολύρριζον* of other Greek writers; the *Polypodium filix mas* of Fuchs and Linnæus; the *Aspidium filix mas* of Swartz; the *Nephrodium filix mas* of Richard, and the *Lastrea filix mas* of Bory and Presl. It is the "common male shield fern" of the vernacular, and is met with almost everywhere in woods, dells, and on shady banks in Great Britain, and is a native of other parts of Europe, and of Asia, of the North of Africa, and of the United States.

The oleo-resin is prepared from what is called "fern root" by the herbalists. This "fern root" is made up of the foot-stalks of the fronds, the true rhizoma, and the scales and radicles, clothing them, and connected thereto. Only fresh portions of this so-called "fern-root" should be employed, but, if fresh, the plant appears to possess its virtues all the year through. These fresh portions are cut in pieces, and dried in a hot-press at a temperature not higher than 140° Fahr. They are then coarsely triturated, packed loosely in a percolator, and exhausted by sulphuric ether in the way of displacement. The greater part of the ether should then be distilled off, and what is left expelled by exposure in an open basin of glass or porcelain to a vapour-bath temperature for a few minutes. An inferior kind (according to the *Edinburgh Monthly Journal*, June, 1852, from which I now quote) is to be found in the market, from which the ether has not been sufficiently or properly removed. The drug thus prepared is a dark-green, sluggish, syrupy oleo-resin, with a peculiar resinous smell and nasty resinous taste, the chemical composition of which is given by Luck in the "*Annalen der Chemie und Pharmacie*" for 1845. "Under the microscope it is seen," according to Dr. Gull, "to consist of a congeries of crystalline particles in the form of spiculae and rhombic plates, scattered or variously aggregated into stellar masses."

Before concluding this part of the subject, I may mention, that during the last few months some attention has been directed in Germany to a new and South African remedy for tapeworm, and for which an absurdly high price has been asked. It has still more lately been discovered that this new drug, called Panna, or Radix panna is identical with a root called Inkomancomo, sent from Port Natal as a famous remedy for *tænia*, greatly employed by the Zulu Kaffirs, and which was laid before the Assembly of Apothecaries at Hamburgh in 1851. Another and chief point of interest to us at present is that this new remedy turns out to be the rhizoma of a fern, or as Martius states, of the *Aspidium athamanticum* of Kunze. This *Aspidium*, again, in the opinion of some good filicologists—Mr. Thomas Moore, e. g.—is more properly a *Lastrea*, the *Lastrea athamantica*, our own remedy being, it will be recollected, *Lastrea filix mas*. According to Dr. Callaway, of Natal, the dried rhizoma of the fern, having been ground to powder, is administered by the Kaffirs in milk or milk-and-water, and taken fasting. Sometimes this mixture is allowed to ferment. At a late meeting of the Pharmaceutical Society, Mr. Daniel Hanbury communicated these and other interesting particulars from Martius, of Erlangen, relative to this new remedy for tapeworm. In the discussion which followed, Mr. Alchin is reported, in the *Pharmaceutical Journal*, to have noticed the fact that the plant described by Dr. Martius belonged to the same genus as the male fern, which it appeared to resemble in its medicinal effects. "He thought it interesting that the two substances should have been employed for the same purpose in different parts of the world."

CAMPHOR AND EPILEPSY.

By JOSEPH O. BROOKHOUSE, Esq., M.R.C.S.

THE following case occurred to me in the practice of Guy's Lying-in Charity:—

E. P—, aged thirty-two, a multipara, and apparently healthy woman, after a natural labour, was ordered the usual after-pain mixture, consisting of spirit of camphor and tincture of hyoscyamus, of each twenty minims, in mucilage, repeated every three or four hours, as might be necessary. About five minutes after taking the first dose she was seized with vertigo, impairment of vision, and almost immediately became insensible. She foamed at the mouth, and there were general twitchings of the muscles, more especially those of expression. No urine or fæces were expelled during the fit, which lasted nearly six minutes. On recovering consciousness, she was quite ignorant of what had transpired, did not complain of inconvenience, and convalesced without any unpleasant symptoms. The above circumstance brought to her mind the fact of her having been affected in a somewhat similar manner eleven or twelve years ago, after eating a piece of camphor about the size of a nut, the only difference between the two attacks being the duration of time with reference to the development of symptoms as well as period of recovery—a difference which may probably be explained by considering the form in which the drug was taken.

April, 1857.

A Mirror

OF THE PRACTICE OF MEDICINE AND SURGERY IN THE HOSPITALS OF LONDON.

Nulla est alia pro certo noscendi via, nisi quam plurimas et morborum et dissectionum historias, tam aliorum proprias, collectas habere et inter se comparare.—MORGAGNI. *De Sed. et Caus. Morb.* lib. 14. Proœmium.

WESTMINSTER HOSPITAL.

CIRCUMSCRIBED EMPYEMA, FOLLOWING PLEURO-PNEUMONIA;
PARACENTESIS THORACIS; RECOVERY.

(Under the care of Dr. FINCHAM.)

THE greater part of the right lung, together with the pleura, were involved in inflammation in the following case, as also was the base of the left lung. The usual symptoms were present, with well-marked physical signs. A circumscribed empyema formed below the third rib, anteriorly, over the right side of the chest, with manifest bulging of the intercostal spaces in the mammary region; this side of the chest, also, measured more than the left. Paracentesis was performed, and about an ounce of healthy pus evacuated. This proceeding was not followed by inconvenience; on the contrary, matters seemed to improve from the date of its performance, and the physical signs gradually became more natural. On June 11th, the report states the sputum to be "frothy, colourless mucus;" this was eleven days after the tapping; if it had been purulent before this, there is no doubt it would not have escaped attention; the patient, however, perspired much at night, and lost flesh. Subsequently to this, namely, on the 15th, general bronchitic symptoms were present, with troublesome cough and profuse muco-purulent expectoration. At a later period all the symptoms improved, with a falling-in of the chest at the seat of the abscess; and finally the patient left for the country, where he became completely restored, and was examined at the hospital on his return.

We have been thus particular in the foregoing details, because no physician for one moment would believe that the ounce of pus withdrawn by the trocar and canula represented the whole of the fluid in the circumscribed abscess in the pleura, which we may safely say contained several ounces. Now how was the remainder of the pus got rid of? The answer is clear—