related I have lost but 3 from the operation, and these were all amongst my earlier operations. This gives a mortality of just over 9 per cent. I feel sure that, with growing experience, we shall be able to reduce that mortality still further. If so, there is no reason what that condition known as catheter life should not in the main disappear. To some, it is true, it proves a matter of but slight inconvenience, but there are few who would not gladly resume their more youthful habits of micturition, even at the risk of an operation, if they realized to the full the dangers they are incurring from sepsis, quite apart from the weakness and lack of energy which is brought on by frequently rising at night to empty their bladders. If the best results are to be obtained, the operation must be performed before the bladder becomes septic.

REFERENCES.

¹ *Archiv f. Pathologie*, cxxvi, 139. ² *Annales des Maladies des Organes Genito-Urinaires*, 1898, vol. xvi, p. 797. Hypertrophies et Neoplasies Epitheliales de la Prostate.

THE LIFE-SPAN OF FILARIA MEDINENSIS.

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OPPORTUNITIES for ascertaining with approximate accuracy the duration of the life-span of the guinea-worm are rare. The annual recurrence of a guinea-worm season in some of the endemic districts affected by that parasite suggests that at least one year, less the three to six weeks necessary for the preparatory metamorphosis in cyclops, must elapse between the date of infection of the human host and the appearance of the mature, embryo-emitting worm at the surface of the body; and, further, that the season of infection is correlated to an annual recurrence of certain hydraulic and thermic conditions favourable to cyclops and to the evolution of the parasite in that crustacean. But it is hard to prove this incontrovertibly from observation in the endemic regions, seeing that it is generally impossible in these localities to exclude the possibility of the infection having taken place at some date prior to or subsequent to the commencement of the postulated year.

As the following cases avoid this source of fallacy they are worth recording.

CASE I.—On May 9th, 1903, I saw, with Dr. Jollye, of Alresford, a gentleman who had just returned from India. He was the subject of multiple guinea-worm infection. His story was that he had been shooting in the Deccan from February to March, that a guinea-worm had presented in the latter month in his left leg and had caused so much suffering from abscess and sloughing that he had been obliged to stop shooting and had come home. He arrived in England a few days before I saw him. Meanwhile two more guinea-worms had made their appearance, one in each thigh. At the date of my visit both worms were alive and readily emitted their young on the skin in their neighbourhood being douched with cold water. This gentleman believed that he had acquired the parasites in India, but on my pointing out to him the improbability that animals which might be 3 ft. in length could attain that size in the course of two or three months he informed me that he had been travelling in Uganda and on the Upper Nile in the spring of the previous year.

CASE II.—Four days after I saw this patient Dr. J. A. Mansell Moullin brought to me a gentleman from whose right axilla a guinea-worm was protruding. The parasite had been partly extracted by rolling out; the foot or so of worm still in the tissues was easily withdrawn. It contained, as shown by microscopic examination, living embryos. I asked the patient where he had been travelling the previous year. He replied that he had been in Uganda and on the Upper Nile in the spring of 1902, and had not been in the tropics since. "Strange," I said, "only four days ago I saw a patient with guinea-worm who had also been travelling at that time in Uganda and on the Upper Nile." "Was his name —?" "Yes," I replied. "Why," said the patient, "he was my companion from Entebbe to Khartoum."

Manifestly these gentlemen had become infected in the same place and about the same time—that is, approximately, a year before their worms presented at the surface of their bodies.

Subsequently one of the patients was good enough to supply me from his diary with the following particulars about dates and route:

We were in East Africa in 1902, mostly in the neighbourhood of Lake Navaisha, from February 10th to March 10th, and on the road between Entebbe and Gondokorro (where the water was very bad in many places), from March 17th till May 25th, and on a Nile boat between Gondokorro and Khartoum from May 25th till June 10th.

THE Organizing Committee of the Universal Exhibition to be held at St. Louis has announced that it will refuse admission to all articles actually or potentially hurtful or dangerous. In this class are included patent medicines the formula of which is kept secret.

The FitzPatrick Lectures ON THE HISTORY OF MEDICINE.

Delivered in the Royal College of Physicians.

By JOSEPH FRANK PAYNE, M.D.,

Fellow and Harveian Librarian.

LECTURE II.

[ABSTRACT.]

BESIDES their native herbal medicines and the more scientific therapeutics and pathology which they had borrowed from the Greeks, the Anglo-Saxons made a large use of charms and what are called magical rites in the treatment of disease. It would be a mistake to suppose, as is sometimes thought, that this was their only or chief method of treatment, or that it was in any way peculiar to the Anglo-Saxons. A great deal of it was taken from the later Greek and Latin medical writers, who show a credulity and superstition quite equal to that of our ancestors.

Again, the magical and superstitious medicine lasted much longer than the Anglo-Saxon period. It went on all through the Middle Ages up till recent times, and is not extinct even at the present day. But it is by no means characteristic of our own country. Indeed, the numerous collections of "folk lore," or what is called "folk medicine," from the peasantry of Continental countries, especially Germany, show that ancient superstitious beliefs of this kind are more prevalent and more inveterate among them than they are among our own people. What is most remarkable is not only that the same general beliefs have survived, but that the very same forms of words have in many cases been preserved for centuries, and may be even now recited in certain places. There is distinct evidence that formulae like those here considered were used by people calling themselves doctors at the end of the eighteenth century, and probably even later.

It is very difficult to define precisely what is meant by magical medicine or what by charms. But broadly, they imply a belief in some supernatural efficacy belonging to verbal formulae recited or written under special circumstances or with reference to special objects. Originally, it would seem that this belief implied also the belief in spirits, demons, or some supernatural beings, who could be either conciliated or coerced by the use of certain words. The belief in supernatural personages gradually waned; and in the case we are now considering heathen or mystical conjurations were to a large extent replaced by Christian prayers and benedictions, while the occult rites of unknown origin were superseded by the services of the Church. But the belief in the supernatural power of certain words in curing disease remained.

Without pretending to a complete classification, the various magical processes and charms may be brought under the following heads:

I. Prayers or invocations addressed to medicinal herbs, or to supernatural beings supposed to have power over them.

II. Special verbal formulae or observances employed in collecting the medicinal herbs or other natural remedies.

III. Prayers and mystical words repeated over the patient or written and applied to some part of his body, with or without ordinary remedies. Such words are very often in a foreign tongue unknown to those who use them, such as Latin among the barbarous or uneducated, Greek or Hebrew among the Latins, and so on; sometimes in a quite unknown language, which have been called Ephesian charms. But they may also be in the vernacular.

IV. Direct conjurations or exorcisms addressed to diseases as if they were evil spirits.

V. Narrative charms—that is, trivial stories relating to sacred or legendary persons who suffered or did something analogous to what the patient is suffering from.

VI. Material magic—that is, the attribution of magical power to certain objects, such as plants or parts of animals, stones, or engraved gems, called amulets, these objects being not used medicinally, but applied in some way to the patient's body.

VII. Transference of disease by a magical formula or ceremony to some animal or material object, or in some way to the outside world.

Examples of all these can be found in older medical literature,