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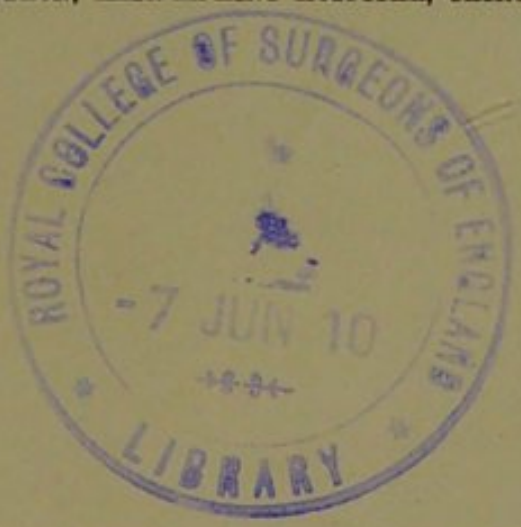

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TWO INTERESTING BILHARZIAL CONDITIONS.

As our clinical knowledge of the widespread ramifications of bilharziosis throughout the body becomes more exact, we are beginning to recognise certain peculiar limitations of the disease in particular organs and tissues ; and, as a result of this increased knowledge, our treatment has become much more radical and effective. And this, too, in cases that formerly appeared beyond any reasonable operative interference short of actual mutilation. In this connexion I would like to record my recent experiences with two bilharzial conditions, in which the results obtained have been very satisfactory—a distinctly encouraging fact in view of our almost hopeless struggle in the treatment of the more advanced degrees of bilharziosis in other parts of urinary and intestinal tracts.

Bilharziosis appears to manifest itself very lightly outside of Egypt ; for a recent writer states that in a long experience of the disease in Natal he has never seen a fatal case. In Egypt, on the contrary, the disease appears to attain the highest level of pathological activity ; and the records of Kasr-el-Ainy Hospital, prepared by Dr. H. B. Day, show that, of a total of 3400 admissions for medical and surgical diseases, in 1907, there were 158 cases of bilharziosis ; and, of this number, 50 cases were unrelieved and 23 died, a mortality of over 14 per cent. ; while, in 1908, of 4003 admissions, 281 were cases of bilharziosis, of whom 45 were unrelieved and 25 died, a mortality of almost 9 per cent. Taking the two years together there was thus a certain mortality of 10 per cent. But this does not nearly represent the true death-rate, as many patients are taken out by their friends in a moribund condition, so great is the native prejudice against dying in hospital. Nor does the number of admissions give much idea of the *frequency* of the disease, as many cases are treated as out-patients, being either in the early stage of the malady or unable to find room in the

wards. Last year, notwithstanding, 7 per cent. of the total admissions for medical and surgical diseases were bilharziosis.

The two conditions to which I wish to refer are: (*a*) bilharziosis of the penis; and (*b*) what was to me a new manifestation of the disease, bilharziosis of the anus and surrounding tissues.

Bilharziosis of the Penis.

By far the greater number of cases of bilharziosis of the penis are associated with bilharziosis of the urethra, with or without urethral fistulæ; but there are certain examples of what may be called primary bilharziosis of this organ, to which attention will first be directed.

1. *Bilharzial deposits in the erectile and subcutaneous tissues of the penis.*—In certain cases there may be "a deposit of bilharzial tissue, in the form of a hard lump, in the corpus spongiosum or even in the corpora cavernosa, which can sometimes be completely removed by operation and which are then seen to have no connexion with the urethral canal."[1] It is only the presence of bilharziosis in other parts of the body and the microscopical examination of the specimen that enable one to make a positive diagnosis. These masses produce no symptoms other than those of inconvenience, and in time tend to soften and reach the skin or urethra. "Sometimes, again, an external sinus leads down to a hard mass of similar characters, but without any urethral communication." Similar lumps may be found immediately beneath the skin of the penis, usually on the under surface, and may be removed in the same way. These subcutaneous deposits may occur in other situations, particularly in the region of the perineum and anus, and ultimately may develop into typical bilharzial sinuses or give rise to a slowly spreading irregular ulceration; but I have never seen this ulceration occur on the penis, except on the glans, where, sometimes as a result of infiltration of this part, there are shallow worm-eaten areas or numerous small patches of atrophic scarring. When a more definite ulceration *does* occur either in the glans or at the meatus it appears to remain quiescent for some time and then suddenly to take on an epitheliomatous growth.

2. *Bilharziosis of the glans penis and prepuce.*—A peculiar bulbous condition of the end of the penis is sometimes met

[1] Bilharziosis, Cassell and Co., 1907.

with, in which the whole severity of the disease seems to vent itself on the glans, the prepuce, and the first inch or two of the urethra. The surface of the glans is dry and pitted or patchily covered with shallow atrophic scars; while, from bilharzial infiltration and obstructed lymphatic circulation, the substance of the glans becomes swollen and hard and merges into a similarly hard swollen prepuce, which forms a very distinct collar of solid œdema, sharply separated by a deep furrow from the body of the penis. This furrow is usually in the site of the circumcision scar. As a result of the solid swelling all round it, and, also, of a bilharzial deposit in the mucous membrane of the urethra, the external meatus becomes very much constricted and there is considerable difficulty in introducing even the smallest sound. The actual orifice of the urethra may be eccentrically placed, owing to the scarring around it and the involvement of the frænum of the prepuce in the solid œdematous change. Once the sound has passed the constricted portion of the urethra it goes on into the bladder without further difficulty. There is frequently a discharge from the meatus in these cases which may be mistaken for gonorrhœa, the swelling of the glans and prepuce being ascribed to an accompanying inflammation of these structures. In these localised cases there are usually no fistulous tracks and only a very limited extent of urethral infiltration. This latter statement was proved in a particular case, as a partial amputation of the penis was performed, in our ignorance, and, to the naked eye at all events, the mucous membrane in the stump was quite normal. Hitherto in such cases a partial amputation has been practised, but in future I should certainly attempt the removal of the swollen prepuce only, as will be described later, at the same time adopting the necessary measures for the effective treatment of the meatal stricture. These milder degrees of bilharziosis of the penis occur almost entirely in boys, which makes it even more imperative to adopt conservative measures if possible.

Of the more definitely *secondary* conditions the most common is—

3. *Bilharziosis of the glans, prepuce, and body of the penis.*—In these cases, in addition to the lesions just described, the skin and subcutaneous tissues of the body of the penis are also involved. Behind the deep furrow at the circumcision scar the penis may be swollen to almost

any extent, with the same peculiar solid œdema, which often only extends to the root of the organ, being here limited by another deep furrow. Cases of this kind are frequently associated with bilharziosis of the urethra, but not all of them, and running through the swollen tissues are numerous urinary fistulæ. In one case of this nature there are several penile fistulæ, communicating with the anterior portion of the urethra. Such fistulæ are generally found on the under surface and open into the urethra at the posterior margin of the glans. In this particular case there is also a peculiar silkiness of the skin of a somewhat enlarged scrotum from partial lymphatic obstruction at its neck. This appearance is not uncommon in this condition. In more advanced cases the urethra is much more extensively affected and numerous fistulæ run irregularly through a mass of false elephantiasis tissue, which not only involves the penis and its coverings but extends to the scrotum and perineum and surrounding parts. In a case of this kind the fistulæ open mainly into the perineal portion of the urethra and less frequently into the penile part. In fact, the clinical picture is rather that of bilharzial urinary fistula than that of bilharziosis of the penis. The testicles are usually quite unaffected, though long tracks may run in the soft tissues of the scrotum and perineum in all directions.

Treatment.—In my earlier cases it was my practice to amputate the penis behind the mass, if possible, and to send the more advanced cases out as inoperable. I am now convinced that in most cases these mutilations are quite unjustified unless an epitheliomatous condition exists, and I now proceed to dissect out the body of the penis from its enveloping sheath of swollen tissues. The operation is similar to that practised for elephantiasis of the penis and consists in a free dorsal incision extending from beyond the limits of the swelling above to the posterior margin of the glans below. The incision is deepened till the loose connective-tissue space between the subcutaneous tissues and corpora cavernosa is opened up. Working in this space laterally in both directions, with a catheter in the urethra as a guide, the whole of the swollen tissue is completely removed, leaving only the glans and the erectile tissue. Fistulous tracks, if they exist, are cut off flush with the urethra, their opening into which is thoroughly scraped. The large raw surface is dressed for the first few days with protective and later with red lotion. When granulation has

commenced, skin grafting by Thiersch's method is practised and the new skin sheath rapidly forms. The glans gradually becomes smaller and the fistulæ slowly heal. Even in the localised form of the disease the ring of swollen prepuce may be dissected off and the surface subsequently grafted and an attempt made to dilate the strictured meatus by incision and subsequent dilatation. Any fistulæ are treated as may be necessary. I wish particularly to advocate this conservative treatment in these cases, and to record my satisfaction of the results obtained by its adoption. The number of cases so far is small—the condition is not a common one ; but if such cases as we have had can be treated successfully in this way it would indeed be a remarkably advanced one that could not.

4. *Bilharziosis of the glans penis ending in epithelioma.*—As has been already incidentally mentioned, a bilharzial infiltration of the glans penis may give rise to a superficial ulceration. This in time progresses by easy stages until it becomes definitely malignant. Here there is usually an extensive infiltration of the urethra with bilharzia, and in a comparatively short time a rapidly spreading epithelioma develops, with secondary glands in the groins and all the ordinary concomitants. Kartulis has published cases of this nature in which he has found many ova among the epithelial downgrowth. Naturally nothing short of a very prompt and radical operation is possible in these circumstances.

Bilharziosis of the Anus and Surrounding Tissues.

I have recently had two cases under treatment at the same time of the above condition, another unusual phase of this many-sided disease and one which is quite new to me ; they are the only ones I have seen. The patients were both prematurely old men with a long history of bilharzia in the urinary tract, but without any symptoms of intestinal infection. The urinary signs gradually disappeared and gave place to those of prolapse of the rectum, which preceded by some time any actual tumour. Constant tenesmus with difficult and painful defæcation were now the principal symptoms, and a good deal of muco-purulent discharge came away with and after the motions. One patient complained of occasional bleeding, but it was not at all a prominent symptom. On examination a hard localised mass was found completely encircling the anus and involving the mucous surface well above the

sphincter muscle. No bilharzial papillomata could be felt or seen, and the mucous membrane was perfectly smooth and not ulcerated. Laterally the mass extended well out on each side into the ischio-rectal fossæ, but could be freely moved in all directions with the anus as its fixed point. On closer examination the lump was seen to consist of much thickened epithelium, in which were deep tracks running for some distance irregularly into the tumour, but having no communication with the rectum. The white sodden epithelium around the orifices of these pits, and the thick, dirty sebaceous-like discharge exuding from them made one think they were sinuses ; but on subsequent dissection it was quite evident that these pits were simply formed by an infolding of a normal, though thickened, epithelium and that nowhere did they communicate with each other or with the rectum. In the midst of the mass was the distorted opening of the anus, resembling somewhat the urethral orifice in the much elongated prepuce of a case of elephantiasis of the penis and scrotum. The tumour itself was very hard but gave no impression of malignancy, nor were there any enlarged glands in the groins. The provisional diagnosis of bilharziosis was made on the presence of the disease in other parts and the resemblance of the growth to somewhat similar appearances of bilharzial papillomatous-like masses about the female genitals.

Under stovaine anæsthesia the mass was completely removed by a circular incision well beyond its limits all round, and finally cutting across the rectum above the growth. The cut edges of the gut were then sutured all round to the surrounding fat, in the hope that contraction would occur later and assist in the formation of a sphincter. No attempt was made to close the rest of the raw surface, and after some weeks it had become firm scar tissue around a much smaller rectal orifice, and both patients regained practically perfect control over their motions.

The mass on section displayed the nature of the epithelial-lined sinuses very well, and for the most part consisted of a much hypertrophied and redundant epithelial covering and a dense fibrous bilharzial tissue. The absence of fistulæ and ulceration on the mucous membrane was remarkable, in striking contrast to the chronic bilharzial ulceration in this situation which in other cases not infrequently ends in epithelioma. The absence, too, of any naked-eye bilharzial infiltration of the rectum is another interesting feature.

Cairo.