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 down-growth. 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 stavaine 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.

A CASE OF LATE RICKETS (?) IN A PREVIOUSLY HEALTHY CHILD AGED THIRTEEN YEARS.

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IN THE LANCET of Nov. 10th, 1906, there appeared a report of an address on Adolescent Rickets, given by Mr. H. H. Clutton to the Clinical Society of London. He quoted at some length a typical case, the photographs of which show striking deformity. As a result of his observations, Mr. Clutton concluded that this somewhat rare disease must be regarded as pathologically identical with infantile rickets; and, so far as I can gather, this appears to be the most generally accepted view to-day. The following case, occurring in my own practice, I venture to publish as being of interest in connexion with this subject.

The patient, a girl, was just under 14 years of age when she first came under my care. Her parents gave me the following history. Until the age of 13 years the child had been remarkably healthy. She had helped her father in the fields—he was a small farmer—and had distinguished herself in games at school, winning several prizes for running and jumping; but with the beginning of menstrual life there had come a change. The girl, though not apparently suffering in her general health, began to have difficulty in walking, and it was noticed that her legs, especially the right, were beginning to bend outwards. She was taken to a “bone-setter.” This gentleman declared, after the manner of his kind, that both hips were “out,” and he proceeded forthwith to “put them in.” So powerful is imagination backed by faith that the parents avowed the child was better for some weeks after these manipulations. However this may be, they presently

took her again, and were now told to go and get "irons." Irons were accordingly obtained and the patient wore them for some months. In the meantime the deformity continued to increase and the apparatus became so painful that it had to be discarded. It was at this stage that I was called in.

Physical examination showed that there was some measure of justification for the bone-setter's diagnosis. The patient walked with a peculiar waddling gait, which closely simulated that of double congenital dislocation, and there was slight lordosis present. Nevertheless, a careful examination of the joints, combined with the history of the case, convinced me that there was not, and never had been, any dislocation. The legs were markedly bowed, the thighs curving out from the pelvis to such an extent that when the child stood with heels together and toes at an angle of 45° there was a gap of six inches between the knees. The right tibia bulged outwards suddenly as it neared the ankle-joint; the left was fairly straight. The pelvis appeared normal. There was slight left dorsal scoliosis, compensated by right lumbar divergence, and the girl was round-shouldered. The parents declared that her back, like her legs, had for 13 years been perfectly straight. For the rest, the patient seemed to be in fair health and spirits, possessed of a good appetite, and free from digestive disturbances. The leg and thigh muscles were well developed and powerful. There was no tenderness in the pelvis, lower limbs, or elsewhere. Menstruation seemed normal; the urine presented no peculiarities; pyrexia was absent. Examination of the thyroid region revealed nothing. Apart from the spinal curvature, which, as above mentioned, was stated to be recent, there was nothing to suggest that the child had ever suffered from infantile rickets—no beading of ribs, enlargement of radial epiphyses, or pigeon chest. Nor could I obtain a history of any of the symptoms of early rickets. Measles and chicken-pox formed the sum-total of her previous ailments.

Treatment.—As iron supports had been tried and found wanting, I ordered the patient to rest for six months. The mischief done by gravity might, I hoped, be overcome by a steady force in an opposite direction, and I therefore had a special apparatus constructed by an instrument maker. The patient lay on a hair mattress. Above the waist she was made as comfortable as possible with cushions, but from the buttocks downwards her body rested on a narrow platform of boards about 3 feet long by 18 inches wide. This was furnished with a perpendicular foot-piece to which the feet were strapped, heels together (with a pad between to prevent soreness), the toes spreading to an angle of about 45° . Around the waist was fitted a belt resembling a portion of a corset; from this a strip of canvas 2 inches wide was passed down on the outer side of each leg to be attached to the foot-piece below. Six bands, $2\frac{1}{2}$ inches wide, consisting partly of canvas and partly of elastic webbing, and furnished with straps and buckles, were passed round both limbs at regular intervals from the thighs to the feet. They were held in position by passing through loops stitched to the side pieces, and it was possible by tightening the straps to exercise a graduated pressure in the direction of approximating the bowed members. In order to prevent the patient from easing the strain by raising her knees the legs were bound down to the wooden platform. The apparatus, as might have been expected, produced a certain amount of cramp, but she was able to bear it quite 16 hours out of the 24.

Meanwhile the patient was given cod-liver oil, phosphorus, and virol; later she had the iodide of iron, and finally thyroid extract. Altogether, I treated her for nine months, two-thirds of which time she lay on her back. The results were disappointing. By the end of six months the legs had grown half an inch in length, and the knees came one and three-quarter inches nearer together; but it is questionable whether this slight improvement was due to anything other than the weight being taken off them. At any rate, an attempt to resume walking produced a rapid recurrence. All I could suggest now was a double osteotomy, followed by at least a year on a couch. Her people demurred to this, however, and I did not press them. Shortly afterwards they left the neighbourhood and I lost sight of the case.

To my mind the relationship between such cases as the above and infantile rickets appears more than doubtful. The rickets of early childhood is now generally admitted to be a disease of nutrition, and is readily amenable to suitable

dietetic measures. That this girl, the daughter of well-to-do country people, suffered from improper feeding is hardly probable. Mr. Clutton's patient was likewise of respectable parentage. I note, too, in his account the same absence of early rachitic history, the same resistance to treatment. Is it not better to admit frankly that we do not know the etiology of the affection? The most we can say is that the disease appears to be connected with the development of the sexual functions; and that, as in the case of those bony and arthritic lesions which occur during pregnancy and the menopause, it may be in some obscure way associated with changes in the internal secretions of the generative glands.

Cockton Hill, Bishop Auckland.

A CALCIFIED LEFT OVARIAN DERMOID, SEPARATED FROM ITS PEDICLE, TRANSPLANTED

ON TO THE RIGHT BROAD LIGAMENT AND VESICAL PERITONEUM; REMOVAL ON THE TENTH DAY OF THE PUERPERIUM FROM A 12 PARA.

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INSTANCES of transplanted ovarian tumours were more often recorded by the early ovariologists when operative measures were not readily undertaken and long-standing cases more frequently came under notice. Sir Spencer Wells¹ refers to a case described by Dr. Atlee, who found a dermoid tumour post mortem in a woman aged 79 years. The presence of a tumour had been recognised 47 years before by Dr. Atlee's uncle. There was no pedicle, and the tumour was dependent upon adhesions for its vascular supply. Sir Spencer Wells himself operated upon a case where the tumour had been present 18 years. During that time the patient had married and had had three children, the tumour lessening with the progress of each pregnancy. There was no pedicle, the blood-supply having been kept up through the vessels of adhering omentum and mesentery. The patient was pregnant at the time and was delivered of a living child seven months after. Mr. Alban Doran² described a case he witnessed which was operated upon by Mr. Knowsley Thornton in 1881. A woman, aged 34 years, had for seven years presented symptoms of an abdominal tumour, and in the interval had given birth to four children. A spherical dermoid cyst of the size of a cricket-ball was removed. It was entirely detached from its pedicle and adherent to the omentum. The right ovary was cystic and was removed. The left Fallopian tube was obstructed and slightly dilated; close to it in the site of the ovarian ligament lay a short firm tag of fatty and partly calcareous tissue. In a paper on Twisted Pedicles Mr. Knowsley Thornton³ mentioned four instances of ovarian dermoids where the pedicle had completely separated.

Transplantation of ovarian tumours is probably usually preceded by torsion and gradual attenuation of the pedicle. As torsion occurs more frequently during pregnancy and the puerperium it is not remarkable that most of the recorded cases have occurred in multiparæ. The length of the pedicle and amount of play allowed are important factors, any drag after the twist has started being sufficient to cause the pedicle to give way. The tumour, usually an aseptic foreign body, transplants itself on to the nearest omentum or intestine. When sudden torsion takes place acute symptoms immediately arise resembling those of intestinal obstruction, and rupture of the tumour from hæmorrhage into its cavity or necrosis or suppuration may occur. If the twist is gradual there may be little to mark the event. Congestion of the tumour may be followed by atrophy. The nutrition is impaired, but adhesions may gradually form and augment the blood-supply. Fibrosis and calcification may follow. The atrophied pedicle may rupture, and if the tumour is free it may find a new resting place in the abdominal cavity, plastic adhesions forming between it and the peritoneum, and providing a new blood-supply.

¹ Spencer Wells: Ovarian and Uterine Tumours, p. 60, 1882.

² Doran: Tumours of the Ovary, London, 1884, p. 118.

³ Knowsley Thornton: Rotation of Ovarian Tumours, International Journal, 1883, p. 357.