

in the blood and with the capacity of the kidneys to excrete them. Thus if the power of the renal epithelium to excrete chlorides is lessened they accumulate in the blood, raising its osmotic pressure so that œdema occurs; and similarly as regards phosphates. The excretory capacity of the kidneys varies and is independent of its permeability to the proteids of the blood. It is accordingly possible for albuminuria to occur without œdema, and for an œdema of renal origin to occur without albuminuria.

But it appears doubtful whether all cases of general œdema without albuminuria—the so-called “essential” or “idiopathic” œdema—should be referred to a diminished capacity of the kidneys to excrete salts. The œdema in the above-described cases, for instance, may have originated in quite a different way—it may have been due to damage to the walls of capillary blood-vessels by poisons absorbed from the alimentary canal without the occurrence of any change in the excretory capacity of the kidneys. Thus in one of the cases it was found that the administration of calcium chloride diminished the œdema. This is probably related to the fact discovered by Wright that calcium salts diminish, while sodium citrate increases, the rate of osmosis of blood plasma through capillary walls in an inflammatory focus where poisons produced by micro-organisms have damaged those walls. A similar event may perhaps ensue where poisons are produced in distant parts—e.g., are absorbed from the alimentary canal. In support of this explanation of the diminution of the œdema by the administration of calcium chloride, I may adduce the fact—which I have found by experiment—that calcium salts, both lactate and chloride, have no influence on diuresis either in healthy individuals or in those suffering from Bright's disease.

Meyer<sup>1</sup> found, in a case of idiopathic dropsy occurring in an infant, that the daily addition of from 1 to 2 grammes of common salt, or of phosphates, to the diet brought about an increased degree of the dropsy. These results may have been due to the increased salt content of the blood increasing the rate of osmosis through damaged capillary walls, and not be related to any diminished excretory capacity of the kidneys, as was thought. General œdema occurring in cases of infantile diarrhoea may thus be due to a direct action of absorbed poisons on capillary walls. This suggestion would bring such cases into relationship with those of “toxic” œdema produced by certain articles of diet (e.g., shellfish) or by drugs (e.g., potassium iodide), and with those of urticaria of intestinal origin.

It may be doubted, however, whether this is the whole story; the occurrence of “intestinal” dropsy in six successive children suggests the possibility of an inborn defect in the walls of capillary blood-vessels whereby they may be more susceptible to poisons circulating in the blood than are the capillaries of normal individuals. This idea was so impressed on my mind by the history of the first four children that, three and a half years ago, I felt bound to tell the mother that I feared that any children who might be born in the future would probably suffer from dropsy if they had the slightest diarrhoea—a prognosis only too unhappily fulfilled.

If the possibility of inborn variations in the permeability of capillary walls, and in their liability to damage by circulating poisons, were admitted, it would afford an explanation of those cases of general dropsy of the fœtus where no anatomical defects in the placenta and fetal organs are present, of the cases of hereditary trophœdema (Milroy's disease), of the susceptibility of certain individuals to erythemata and urticaria on the slightest toxæmia, as well as of the lamentable history of the children which I have recorded.

Clifton, Bristol.

<sup>1</sup> Zur Kenntnis des idiopathischen Œdems des Säuglings, Deutsche Medizinische Wochenschrift, 1905, Band xxx., pp. 1464-1467.

UNIVERSITY OF MANCHESTER.—The following appointments have been made:—Lecturer in vegetable physiology and demonstrator in botany: Mr. D. Thoday. Mr. Thoday takes the place of Mr. A. Malins Smith, who has resigned on his election to the position of Principal in the Agricultural College, Chelmsford. Lecturer in orthopædic surgery: Mr. Charles Roberts. Assistant lecturers in surgery: Mr. P. R. Wrigley and Mr. Garnett Wright.

## SARCOMA OF THE PENIS.<sup>1</sup>

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ALTHOUGH not unknown, true sarcoma of the penis is an extremely rare condition. If out of the recorded cases we exclude small melanotic tumours (usually near the meatus) and those which may be termed doubtful from want of specification, the number falls still lower; though it must be admitted, on the other hand, that some cases which have been looked upon as carcinoma of the penis may really have been sarcoma. Most of the text-books decline to commit themselves on the subject of sarcoma affecting the penis, and content themselves either by omitting reference to this altogether, as in Beattie and Dickson<sup>2</sup> and Coats,<sup>3</sup> or by stating that sarcoma occurs, but is rare. Actual specimens of sarcoma of the penis are very few in number in the pathological museums of this country, including Scotland; most of the large museums (including that of the Royal College of Surgeons in London) have none.

Clinically, the diagnosis may be exceedingly difficult, if not impossible. In the instance about to be recorded there was no doubt in the mind of the surgeon that the condition was carcinoma of the penis. In this connexion it is interesting to note that Kaufmann,<sup>4</sup> who terms sarcoma of the penis an example of endothelioma vasculare, points out that the condition is very liable to be confounded with urethral carcinoma. Adami<sup>5</sup> corroborates Kaufmann in this matter. In all the references which I have been able to collect there are only two which are to a slight extent parallel with the present one; these are recorded by W. H. Battle<sup>6</sup> and H. W. Webber.<sup>7</sup> A case of sarcoma of the crus penis is also recorded by E. H. Fenwick.<sup>8</sup>

The present case occurred in September, 1910, when a man, aged 60, was admitted to the Royal Sussex County Hospital suffering from a tumour of the penis, which appeared to originate in the prepuce and to have invaded the surrounding tissues for some distance and depth. The growth was of about the size of the fist, and was soft in consistence and hæmorrhagic at parts. The man had first noticed the tumour as a small papule on the dorsum of the penis about eight months previous to admission; its growth had been more rapid recently. On admission small rather firm masses were distinctly felt in both inguinal regions. As the interest of the case is pathological more than clinical, I need only say that the tumour was duly removed on Oct. 1st by Mr. H. N. Fletcher, with the whole of the penis and crura, and sent to me in the ordinary course of events for minute examination. I saw the mass when it arrived at my department, and I had no doubt, judging from the naked-eye appearances, that the diagnosis of carcinoma of the penis was correct. Sections from several parts of the growth were duly made, and when these were examined in the first instance I was not on duty. My assistant, Mr. Warren, who examined the sections, gave a tentative diagnosis of sarcoma, which diagnosis was fully confirmed by me on my return.

The masses in the inguinal regions enlarged rapidly after the operation; they were accordingly removed by Mr. Fletcher on Oct. 21st and sent to me for examination. The masses were found to be partly within and partly external to the glands. My report on the sections made is as follows: “Sections of portions taken from three distinct regions of the mass from one side show in each case a spindle-celled sarcoma, with hæmorrhage and partial necrosis at points. In two of the sections no gland tissue can be made out; but in the third the lymphoid tissue is present, with the sarcomatous area centrally situated.” The naked-eye and histological appearances of these masses are interesting in respect that they indicate in this instance a more or less simultaneous

<sup>1</sup> A case from the Stephen Ralli Memorial Laboratory, Royal Sussex County Hospital, Brighton.

<sup>2</sup> A Text-book of Special Pathology, 1909.

<sup>3</sup> Manual of Pathology, 1900.

<sup>4</sup> Pathological Anatomy (German edition), p. 906.

<sup>5</sup> Systemic Pathology, p. 792.

<sup>6</sup> Transactions of the Pathological Society of London for 1892-3.

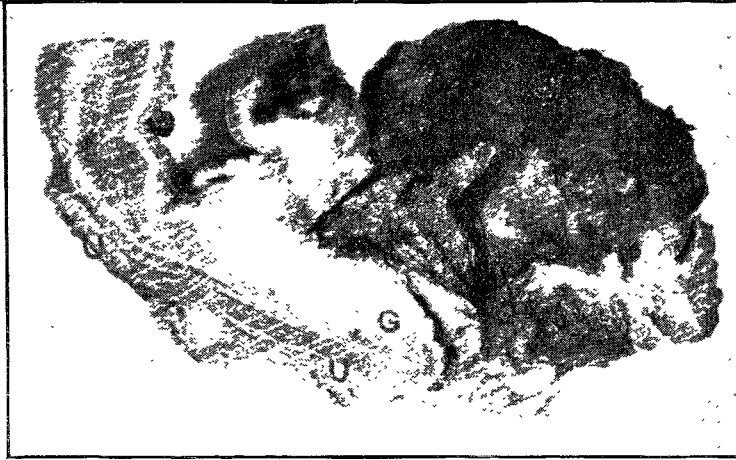
<sup>7</sup> Brit. Med. Jour., Dec. 16th, 1905.

<sup>8</sup> Transactions of the Pathological Society of London for 1889-90.

carriage of the growth by the blood-stream and the lymphatics. The patient died on Nov. 21st; unfortunately a necropsy was not obtained. There was little doubt, however, that there were numerous metastatic growths in the abdomen at least.

After the penis with the attached tumour had been carefully hardened for some weeks it was divided mesially, when the condition shown in Fig. 1 was presented. It will be

FIG. 1.



Mesial section of penis and attached tumour. UU, Urethra. G, Glans penis.

seen that even without microscopic examination the condition is evidently sarcoma. The tumour originates in the corpus cavernosum, extending from immediately behind the glans to rather more than an inch and a half towards the root of the penis. Both corpora cavernosa were almost equally involved. The direction of growth of the tumour is almost entirely outwards, the mass finally coming to present the appearance as shown, where the prepuce appears to be

FIG. 2.

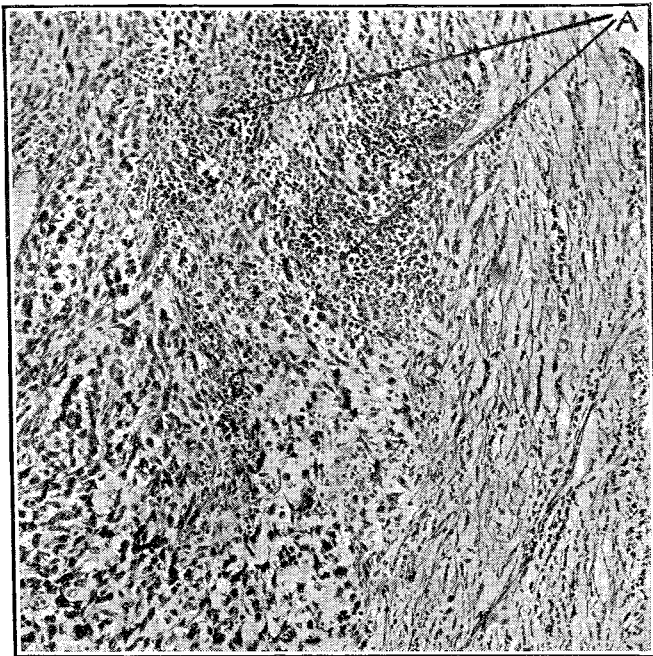


Photo-micrograph of the primary growth. A points to areas of inflammatory deposit. ( $\times 80$  diameters.)

the part which is the seat of the tumour. Another interesting feature is that at no time was there the slightest interference with the structure or function of the urethra; the urethral canal is indicated in the figure by a half cylinder of plasticine, showing as a dark rod-like mass. Considering the size of the growth, the limited area of the corpora cavernosa involved is striking.

Fig. 2 shows a photo-micrograph of the primary growth, which was kindly taken for me by Dr. E. J. Spitta. The field selected is near the surface, and shows the stretched and thinned-out epithelium covering the growth, with consequent obliteration of the papillæ. The magnification is 80 diameters. The picture is that of a spindle-celled sarcoma, with the usual interlacing of the bundles. To all appearance there is no stroma whatever. At two parts in the figure there are small aggregations of inflammatory cells; these were entirely absent in the central portions. The appearances in the case of the sections from the inguinal mass were exactly similar, with the addition of hæmorrhage and necrosis at parts, so there was nothing to be gained by having another photograph taken of this secondary deposit.

Alike in the history, course, termination, and histological picture the present case is typical of sarcoma. In most, if not all, of the cases previously recorded there were deviations in some direction. In Webber's recent case, for instance, there was purulent urethral discharge with pain on micturition, and the sections showed "a fibrous tissue network with wide irregular spaces filled with large round and oval cells." In some of the other cases the cells are also described as being round in character. No photographs are given in cases which have been recorded previously.

As to the ultimate origin of the cells from which the growth originated, it is impossible to speak with certainty. They may have arisen from: (1) the endothelium of the vessels of the corpora cavernosa (Kaufmann's endothelioma vasculare); (2) the endothelial lining of the lymphatics of the same structures; and (3) from the connective tissue cells of the inter-sinusoidal stroma. At no part was the epithelium involved in the growth.

It is not at all unlikely that we shall find, as time goes on and the routine histological examination of every piece of tissue removed from the body becomes general, that sarcoma of the penis is not so very rare as present statistics would indicate.<sup>9</sup>

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## A CASE OF ANTERIOR DISLOCATION OF THE SEMILUNAR CARPAL BONE.

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THE patient, aged 48, fell down two stairs on Dec. 13th, 1910, bruising his side, damaging his left wrist, and cutting his head. He was concussed by the fall, and remained unconscious for about three-quarters of an hour. On recovering consciousness he had no notion of the exact method of falling, and did not know whether the wrist was in a position of extension or of flexion. His head condition and bruised side rapidly recovered, but the wrist remained swollen, painful, and with marked limitation of movement. An X ray examination was made, but no fracture was discovered, and the case was regarded as one of a severe sprain of the wrist. Massage and movements were tried, but these caused considerable pain and produced no beneficial result.

I first saw the patient seven weeks after the accident. The left wrist was thickened, and there was a prominence just on the carpal side of the radio-carpal joint and deep to the flexor tendons. There was well-marked synovitis of the flexor tendon sheaths. This part of the wrist was tender on pressure. The styloid processes of the radius and ulna were normally placed, but the palm appeared to be shortened when compared to that of the opposite side. There was no tenderness or swelling in the anatomical snuff-box to indicate fracture of the scaphoid. The movement at the wrist and mid-carpal joints was markedly restricted. Flexion was almost *nil*, extension was limited to a few degrees of movement, and abduction and adduction of the hand were limited, although to a less extent. On attempting any forcible movement great pain was experienced, and also a tingling of the fingers over the median nerve area. The grip with the left hand was very poor, and there was

<sup>9</sup> Additional references:—Hektoen and Reisman: A Text-book of Pathology, 1901, p. 1012 D.; THE LANCET, March 21st, 1885; Nov. 23rd, 1889 (this refers to Fenwick's case, *ut supra*);