ACCOUNT OF A RECENT REMARKABLE CASE
OF
SCROTAL ELEPHANTIASIS,
IN WHICH THE TUMOUR WAS REMOVED.

BY
JOHN WIBLIN, F.R.C.S.,
MEDICAL SUPERINTENDENT OF QUARANTINE, SOUTHAMPTON.

Received Oct. 13th.—Read Nov. 11th, 1862.

THE subject of the following history, George F—, was a native of Southampton. He was forty years of age, sallow of complexion, but otherwise seemingly of healthy aspect; married, but without family. From the age of sixteen he had worked as an ordinary labourer on the town quays and in the docks, except during the two years 1835 and 1836, when he was employed in the coasting trade from Southampton to several of the ports of England, Ireland, and Scotland. His habits had always been moderately temperate, and (according to his own belief) his health excellent, having suffered from but one severe illness, when a child.

In the year 1844, whilst in the act of grinding malt, he ruptured himself on both sides. For the relief of this ailment, and under the direction of the parochial medical officer, he wore a suitable truss two or three years. The rupture on the left side becoming rapidly larger, he obtained a new truss, wore it for a year or more, but finding that it afforded little relief, he abandoned its use altogether.

In the year 1848 he contracted syphilis. For the cure of this disorder he applied to a druggist, who (if his own statement is to be credited) gave him corrosive sublimate in tolerably large doses, at intervals, over a period of six months, when he considered himself perfectly cured.

About three months after he had become the subject of syphilis, the foreskin and integuments of the penis began to enlarge, and he constantly experienced a dull, aching pain at the extremity of that organ. From this period the scrotum also gradually increased in size, becoming hard, brawny, heavier, and more pendulous.

Six months after he had contracted syphilis an eruption appeared on the arms, consisting (according to his own description) of large red patches covered with numerous "boils," and ending in suppurating sores, which, on healing, left a distinct scab. This eruption, at the time I first saw him, had continued more or less for a period of six years, and it was present on the scalp, nape of the neck, abdomen, back, pubes, and all over the anterior surface of the hypertrophied scrotum, and possessed the chief characters of *vitaligo*—consisting mainly of large white patches, surrounded by a bronzed margin.

When the case came first under observation, the abnormal growth of the prepuce and scrotum had attained the following dimensions:

Preputial growth.—Length, 16 inches; circumference, 13 inches.

Scrotal growth.—Vertical circumference, from the symphysis pubis, following the raphé of the scrotum, to within two inches of the anus, 3 feet 6 inches; lateral circumference, 3 feet 14 inches.

The scrotum and prepuce had increased very rapidly in size within the two last as compared with previous years. The enlargement had, moreover, become extremely burthen-some, and, in some spots, painful; while, in others, particularly where friction was unavoidable in the act of walking, ulceration had taken place, giving rise to a most troublesome and offensive secretion.

These evils had been present some time before surgical aid was sought; and even then the case would not have come under my care but from the parochial medical officer, Dr. Dusautoy, being incapacitated by serious illness from taking charge of it.

From the rarity of the disease in this country, I was anxious to avail myself of whatever aid I might obtain from my professional brethren, and a meeting of the Fellows of the Royal College of Surgeons occurring soon after I had undertaken the care of the case, I brought the patient to town for their inspection. He was seen by a large number of the Fellows, nearly all of whom agreed with me in advising the removal of the morbid growth. As many who were wishful, were unable at the time to see the case, it was temporarily transferred to Mr. Fergusson's care, at King's College Hospital. Subsequently the patient returned to Southampton.

At this period the tumour (the dimensions of which have already been given) was ascertained to weigh, when suspended by means of a steelyard, more than fifty pounds. The prepuce presented a remarkable, nodulated appearance, and the extremity was so curved or involuted by means of the frænum, that on a superficial examination it was liable to be mistaken for the penis itself. Through this involuted, exaggerated portion of the prepuce, the urine dribbled away at times; on some occasions the passage would become distended, and the patient eject the secretion in a long, continued, fine stream. A finger could readily be passed through the external opening, and introduced to the extent of five or six inches; and at the extremity of the canal formed by the elongated prepuce, the glans penis could easily be detected. The scrotal portion of the diseased structures extended from a little above the symphysis pubis to within a few inches of the anus. This portion was nodulated in parts, with smooth intervals; and here and there the surface was scarred with cicatrices of old and recent standing, arising from the eruption already described. On the right side, and at the most dependent part of the growth,

there were indications, it was thought, of a considerable quantity of fluid. On the left side a very large hernial swelling could be recognised without difficulty. This rupture was regarded by myself, and many eminent surgeons who had handled it, to be of a reducible character; and the patient himself entertained a similar opinion, believing that he could return the gut at will.

An operation for the removal of the abnormal mass being determined upon, the first consideration was the practicability of devising some means of diminishing the risk arising from hæmorrhage. Mr. T. Spencer Wells, who was on a visit to me at the time, suggested the construction of a large clamp, formed of two moveable parallel bars, connected by a screw at each extremity; and by the application of which across the neck of the tumour, it was thought that not only the hæmorrhage might be controlled to a great extent, but also the hernial protrusion retained within the abdominal cavity. Means were also adopted to drain the tumour, as far as practicable, of blood. To this end, an iron rod, to which was attached a sliding hook, and tackle and fall for elevating and depressing the mass, as circumstances might require, was firmly fixed to a beam in the ceiling of the room occupied by the patient. By this means, on the day of operation—September the 21st—he being placed on a suitable table, the tumour was well elevated above the level of the body, and kept in this position, surrounded by ice, from 8 a.m. until 2 p.m.; then chloroform was cautiously administered by my fellow-townsmen, Dr. Palk, and at 2.20 the operation was commenced.

The clamp being adjusted across the neck of the tumour, a long, curved, sharp-pointed bistoury was introduced into the canal of the enlarged and elongated prepuce, and this was slit up to the point where the glans penis had been previously ascertained to be embedded in the mass. A perpendicular incision, about eight inches long, was made along the dorsum penis to the symphysis pubis. An attempt to introduce a staff into the urethra, with a view to draw the penis up behind the pubic arch, and so

facilitate its subsequent dissection from the surrounding parts, failed. The penis was next seized, rapidly and easily detached, and dragged out of harm's way.

An incision was then made on the right side of the tumour, fourteen or sixteen inches in length, and extending from the lower extremity of the perpendicular cut to the most depending part of the mass. Next the forefinger of the left hand was thrust deeply into the wound, and served as a guide upon which was directed a stout, long, blunt-pointed bistoury, with which the deep-seated structures, the thickness of which averaged from four to five inches, were cut open. Large quantities of serum flowed from the blubber-like structures exposed at each stroke of the knife. The right testicle was found towards the middle of the last incision. It was carefully dissected upwards to near the right inguinal ring, and given into the charge of an assistant.

A similar method of procedure was adopted over the left side of the tumour, but in the confusion of parts there, the testicle was wounded before it was recognised, and the hernial sac opened. The sac was found to be occupied by several coils of intestine, but these had escaped injury from the knife. The pressure of the clamp was immediately diminished, and every effort exerted to return the gut within the abdominal cavity, but without success. It was then determined to remove the tumour in two portions. To effect this object the mass was transfixed, from before backwards, by a long catlin—the point of the knife being brought out in the centre of the perinæum, within two or three inches of the anus. The whole of the mass on the right side was now swept away; then the hernial sac was cautiously dissected out, and, with a few strokes of the knife, the left portion of the tumour was speedily removed.

About ten or a dozen ligatures were required to arrest the bleeding from several very small arterial branches—the only important one being the left spermatic artery, which necessarily required a ligature after the removal of the wounded testicle. The sides of the opening in the sac

were brought together by three stitches ; many parts of the divided surfaces were drawn into tolerably good apposition by means of a few sutures ; a dressing of lint saturated with oil was made use of ; and, finally, the patient was removed from the operating table and conveyed to his bed.

The time occupied in the removal of the tumour was about twenty-one minutes ; the ligaturing of arteries, apposition of parts, and dressing, extended over twenty-five minutes more.

The amount of blood lost during the operation was estimated at from thirty to forty ounces. This trifling loss of blood was to be attributed to the admirable manner in which Mr. Spencer Wells regulated the pressure of the clamp, and to the rapidity with which Messrs. H. Smith, Mason, Carr Jackson, and Orsborn followed every stroke of the knife, and most effectually controlled the mouths of the bleeding vessels. The solid portion of the tumour, after removal, weighed nearly thirty pounds.

The following notes of the after-treatment of the case, taken from my case-book, were made by my assistants.

At 5 p.m., two hours after the operation, the pulse was 100, and somewhat feeble. An anodyne was given consisting of one drachm of laudanum in half an ounce of brandy and water. This was presently rejected.

10 p.m.—The patient was restless and complained of pain in the back ; $\mathfrak{mxxx}$ Tinct. Opii to be taken in half an ounce of brandy and water every two hours. The first dose was retained a short period. He took iced water freely, and slept three hours during the night.

Sept. 22nd.—The irritability of the stomach still continued ; pulse 130 ; respirations twenty per minute. Soda water and brandy, or a mixture of Chloric Æther and dilute Hydrocyanic Acid to be taken every three hours. Irritability of the stomach somewhat diminished ; he took a small quantity of beef tea which was, however, very speedily rejected.

6 p.m.—Bathed in a profuse perspiration ; became talkative but was rational. Port wine, brandy, and laudanum,

to be given at regulated intervals. Slept about two hours during the night.

23rd, 2:30 a.m.—Four ounces of urine were passed, and he expressed himself greatly relieved; much gratified by holding the penis, which he had not done before for ten years. Pulse 120; continued to take iced soda-water and brandy, and small doses of laudanum.

5:30 a.m.—Passed six ounces of urine.

6 a.m.—Complained of slight pain in the stomach; slept very little since midnight.

8 a.m.—Passed urine; slight pain in the abdomen, the pulse being 120, full and strong.

10:30 a.m.—Passed twelve ounces of urine.

11 a.m.—Complained of pain in the chest, which was relieved by the hydrocyanic acid mixture.

1 p.m.—Took an egg and wine.

2:30 p.m.—Irritability of stomach greatly diminished.

3 p.m.—Passed a motion in bed; milk and brandy to be given every two hours.

5:30 p.m.—Passed a copious, well-formed motion; pulse 120, full and strong.

24th, 3 a.m.—Had a little sleep, and passed urine freely; stated that he felt much better and stronger.

6:30 a.m.—Passed urine; took an egg beaten up in tea, and a slice of toast, slept again for an hour or more.

11 a.m.—Pulse 119; passed urine copiously; irritability of stomach troublesome.

2:40 p.m.—Passed a copious and healthy-looking motion; complains of slight pain over the abdomen; ordered turpentine stupes; pulse 130, very full.

25th.—Did not pass so good a night as the last.

8:30 a.m.—Pulse 100, tongue moist, abdomen painful and slightly tympanitic.

2:30 p.m.—The wounds were dressed for the first time since the operation; the hernial sac and the penis were covered with healthy pus; a little spirit of turpentine was added to the dressing.

5.30 p.m.—Appears comfortable ; very communicative.

6 p.m.—Passed a good motion and a large quantity of urine.

11.45 p.m.—Abdomen became greatly distended ; the respiration and the whole system disturbed.

12 p.m.—Passed a motion, with great relief to the painful abdominal distension ; irritability of stomach returned ; vomiting ; pulse 110 ; tongue moist and clean.

26th, 2.30 a.m.—Passed another good motion ; slept for an hour and a half.

3.30 a.m.—Vomiting and distension of abdomen increased ; hot turpentine stupes made use of, and the hydrocyanic acid mixture with milk and brandy.

6 a.m.—Very restless ; great augmentation of abdominal distension ; pulse 120 ; tongue clean and moist ; complains of great prostration ; takes alcoholic beverages freely, but the stomach will not retain them.

8 p.m.—Abdominal distension still greater ; extreme difficulty of breathing.

10 a.m.—Expired somewhat suddenly.

Examination of the body on the morning of the 27th.—The abdominal cavity and the hernial sac and its contents were alone submitted to inspection. The former presented no morbid appearance, except an enormously distended condition of the intestines. The latter showed the nature and extent of the mischief which had caused death. The sac measured in its longitudinal (antero-posterior) circumference nearly thirty inches, and in its horizontal circumference about twenty inches ; it was unusually thickened, in some parts to the extent of half an inch. The contents consisted of large coils of small intestine firmly matted together by old adhesions ; and the cæcum and appendix vermiformis were tightly bound by fibrinous bands, of long standing, to the upper and outer portion. There was no strangulation nor discoloration of the gut at the mouth of the sac, and the finger could be readily passed around the intestine occupying it ; but the areolar tissue in the vicinity of the accidental incisions, as well as the lowermost coils of the

protruded gut were gangrenous. This was unquestionably the cause of death.

An examination of the tumour, made soon after its removal, by Mr. Flower, of the Royal College of Surgeons, showed the following characters :

The substance consisted almost entirely of fibro-cellular tissue, abundantly infiltrated with serum, and containing in some parts fat, collected in roundish masses, but not in any large quantity. Externally, it was directly continuous with the deeper layers of integument.

Microscopically the structure could scarcely be distinguished from that of ordinary connective tissue, consisting of bundles of very delicate, colourless, wavy filaments, with a few scattered nuclei among them. It was gelatinized by acetic acid, presenting after the addition of that reagent a soft-looking homogeneous mass, with scattered granules and nuclei, and a few blood-vessels and elastic fibres. These last were very sparingly found, except in the dermal portions of the tumour.

Such is a history of this case and of the proceedings which were adopted in its treatment. The rarity of scrotal elephantiasis in this country will, perhaps, justify the addition of a tabulated summary of the chief recorded instances of the affection.

Authority.	Age.	Native of what country.	Dimensions.	Weight.	Especial points of interest.	Treatment.	Result.	Examination of growth.	References.
1 DIONIS (died 1718)	—	Negro, Pondicherry	1 ft. 3 in. length; ditto breadth, 3 ft. 6 in. circum- ference	60 lbs. (estimated)	Uneven, and hard as a stone	—	—	—	'Cours d'Opérations de Chirurgie démontrées au Jardin Royal,' 2 ^d ed.
2 CHESELDEN	—	Negro	—	—	Enormously de- veloped scrotum	—	—	—	Depicted in 4th ed. of 'Anatomy.'
3 WAITHEE	—	—	—	40 lbs. (nearly)	Descended to knees	—	—	Skin of scrotum 3 inches thicker than natural; cellular membrane surrounding testicles distended by a viscus fluid	—
4 MORGAGNI	—	—	—	—	Refers to tumour as large as the heads of two men joined together. Mentions points of another tumour	—	—	—	'Epistolæ Anatomicæ,' xliii, Art. 42.
5 MICHIE DE LA TOUCHE	70	—	1 ft. 6 in. length, 3 ft. 1 in. circum- ference	—	—	—	—	—	—

6	CHOPART	50	Negro, Guinea Coast (resident twenty years at Martinique)	24 ft. length, 2 ft. 2 in. circumference of upper part, 3 ft. 2 in. circumference of lower part	40 lbs.	Scrotum reached to the ankles	—	—	—	'Traité des Maladies Chirurgicales.'
7	RAYMONDON	40	—	23 in. length, 32 in. circumference of largest part	29 lbs.	Thirteen years growing to this size. Caused neither pain nor inconvenience, except from weight	Punctured; removed. Penis and right testicle (dis-eased) taken away	Death six hours after operation	Referred to by Chopart.	
8	IMBERT DE LONNES	—	Frenchman. (A minister of State)	—	30 lbs.	Tumour had existed fourteen years	Removed. Operation lasted two hours and a half	Recovery	—	
9	LARREY	—	—	—	—	Details several cases in his account of the Egyptian campaign. Operated successfully in one case	—	—	'Mémoires de la Chirurgie Militaire,' vol. ii, p. 110.	
10	HENDY	50	Negro, Barbadoes	24 in. length, 6 ft. circumference	—	Surface of mass rough and uneven. Felt to the touch as if it contained half-coagulated fluid. No part of penis could be discovered. Urine voided at an opening 20 inches from pubis	—	Mortified. Death	(Dr. Hendy knew of five other cases in which the scrotum sloughed, so as to denude the testicles.)	

Authority.	Age.	Native of what country.	Dimensions.	Weight.	Especially points of interest.	Treatment.	Result.	Examination of growth.	References.
11 CORSE	—	Hindoo	25 in. length, 38 in. circumference of middle, 14 in. circumference of root, 20 in. circumference near the end —	—	—	—	—	—	—
12 —	—	Negro (?)	—	—	Scrotum so excessively developed, that the patient was obliged to keep constantly in bed	—	—	—	'Phil. Trans.'
13 DADD	—	Native of Africa (West Indies)	Penis alone affected; 14 in. length, 12½ in. circumference	—	—	—	—	—	—
14 TITLEY	—	Negro	29 in. length, 43 in. circumference	70 lbs.	Descended to within an inch of the ground, dragging down the abdominal integuments. Surface equal and smooth, superficial veins much enlarged	Removed. Penis dissected out, testicles cut away with the mass	Recovery	Testicles occupied normal position. Left testicle enlarged; tunica vaginalis of right testicle contained three pints of fluid. Scrotum from two to four and a half inches in thickness; in all of which cavity filled with a gelatinous matter, which formed also	'Pract. Treatise on Diseases of the Genitals of the Male,' London, 1829, pp. 312-314. N.B.—Dr. Titley operated in five other cases, in all of which the operator was successful. He also mentions

15	Ditto	—	Negro (?) (St. Christopher's)	—	165 lbs.	Not under Dr. Titley's care	Removed	Death	jelly on cooling, several cases successful operation and investment on by Dr. of spermatic cords, Caines. infiltrated with like matter. —	—
16	Ditto	—	—	20 in. length, 44 in. circumference	—	Ditto	Removed	Death	—	—
17	LISTON	22	—	42 in. circumference, 40 in. from verge of anus to pubis	44 lbs.	Skin coarse and much stretched; extended beneath portions of the patient's knees. Urine escaped through the fissures of a large warty mass	Removed. An attempt to save some portions of the genital organs obliged to be given up from the enormous hæmorrhage	Recovery	Substance of tumour dense, resembling in appearance the mammary gland. Same character pervaded all the tissues	'Edin. Med. Journ.,' 1823.
18	WELLS	30	Negro	—	10 lbs.	—	Removed. Penis and testicles saved. Veins numerous and enormously large; hæmorrhage considerable. One vein as large as vena cava. The patient "did remarkably well after the operation, and went home in three months—et satis ad veneram pollebat"	—	—	'Amer. Journ. of Med. Science,' May, 1828.

Authority.	Age.	Native of what country.	Dimensions.	Weight.	Especially points of interest.	Treatment.	Result.	Examination of growth.	References.
19 CLOT. BAY	—	—	—	110 lbs.	—	Removed	—	—	'Travaux de l'Ecole de Med. d'Abou, Zabel, Egypte,' Paris, 1883, p. 131.
20 DELPECH	—	—	—	60 lbs.	—	Removed	Wounds healed up in two months. Patient returned home; after a few weeks fell ill and died; a large abscess found in liver	—	Von Graefe und von Walther's 'Journal für Chirurgie und Augenheilkunde,' vol. ii, p. 647.
21 ASTON KEY April, 1881.	32	Chinese	4 ft. circumference	56 lbs.	Growth of ten years; involving genitals.	Removed. An attempt to save the genitals failed	Death	Hypertrophied integuments and connective tissue.	'London Medical Gazette,' vol. viii, p. 93. Preparations in Museum of Guy's Hospital. No. 1620 ^o .

The following notes may also prove of interest :

M. Scuts-Amdial extirpated a tumour of the scrotum of enormous size, at Rio Janeiro, in 1843, with only a trifling loss of blood. The tumour weighed 143 pounds, and the patient recovered.

Dr. Goodwin, of Calcutta, removed a scrotal tumour weighing upwards of fifty pounds. The patient only lived six hours, the hæmorrhage being uncontrollable.

Dr. O'Brien, who has, or had, charge of the Hospital for Elephantiasis, in Calcutta, states that the largest scrotal tumour coming under his observation was two feet in length, and five feet in circumference; it weighed ninety pounds, including a hydrocele which, he says, is almost always present in the affection. Dr. O'Brien, when operating in these cases, always placed the patient under the influence of chloroform, but kept a galvanic battery at hand; because, he states, the weight of such a tumour naturally drags the abdominal walls to a vast extent, and when the tension and pressure are removed, there is relaxation of these tissues, and consequent collapse of the diaphragm. He describes a case in which the patient, who had not lost a pint of blood, and had been only four minutes and a half under chloroform, was declared dead by his assistants, but was brought round by the use of the battery. 'Dublin Hospital Gazette,' January 1, 1857.

Mr. Godfrey, superintending surgeon in the East India Company's service, removed an immense scrotal tumour from a native, aged thirty, residing in the suburbs of Madras. The length of the tumour was twenty-six inches, the circumference a yard and a half. The operation was performed thus:—A piece of stick was passed into the preputial orifice as a director, and an incision made down to the penis. Another incision was then carried obliquely from the right groin to join the first incision. On continuing this incision, however, the gush of blood from some large veins was so terrific and uncontrollable, that to save the patient's life the whole of the diseased mass was removed as speedily as possible. When the bleeding surface was

fully exposed, the hæmorrhage was checked by ligatures and pressure. The wound was closed by needles and twisted sutures. The case did well, the man making a good recovery. The tumour weighed seventy pounds.

Mr. Godfrey suggests (in order to effect the same purpose—the control of hæmorrhage—which in my case was aimed at by the use of the clamp) that, in operations of this character, a needle, carrying a strong ligature, should be passed through the neck of the tumour on each side of the penis. The ligatures being then firmly tied on the outer side, so that the two halves of the neck would be enclosed, the flow of blood during the operation might in some degree be checked.

Many other examples of scrotal elephantiasis are recorded in the journals. Dr. Esdaile, of Calcutta, has described numerous instances, and he must have operated in nearly 200 cases. In the 'Lancet' of 28th September, 1861, a case is published which occurred under the care of Mr. Fergusson, at King's College Hospital, and in which a scrotal tumour weighing six pounds, was removed with success. Again, in a recent number of the 'Edinburgh Medical Journal,' Dr. Fayrer, Professor of Surgery in the Bengal Medical College, in a most interesting paper on "The Scrotal Elephantiasis of Bengal," gives brief accounts of fourteen cases of the malady in which he operated between July, 1859, and September, 1861.

Of these cases, nine were cured, four died (three from pyæmia and one from shock), and one was still under treatment when his paper was written. The weight of the tumours removed varied from three pounds to sixty-six pounds.

Professor Fayrer's description of the operation of removal is peculiarly clear and instructive. He says:

"The operation for removal of a scrotal tumour is simple enough, but it requires determination and expedition. It needs also the aid of several intelligent assistants.

"Before commencing, it is well to have the tumour raised and supported in a vertical position for half-an-hour, to

drain it of blood as much as possible; then, the patient having been placed in a recumbent position on an ordinary table, with the nates brought near the end of it, he is to be put under the influence of chloroform, and the incisions are to be commenced.

“The instruments required are, a long steel director to guide the knife in cutting down to the penis, a large scalpel, an amputating knife, artery forceps, and plenty of silk ligatures; a few of the small bull-dog forceps also are useful in temporarily controlling inconvenient hæmorrhage from divided veins.

“Several assistants are required to hold back the legs, raise the penis and testes, support the tumour, and rapidly secure the numerous bleeding points. These being provided, the operation may be begun. The director is to be introduced into the passage at the bottom of which lies the glans penis, and that organ exposed, by laying open with either the long catlin, or a sharp-pointed bistoury, the dense tissue covering it. The prepuce is frequently found quite healthy and dragged forward. If so, it is well to reflect a portion of it as a future covering for the penis, which, if well managed in the subsequent dressing, becomes a better integument than the cicatrix tissue which must otherwise take its place. In the event of the prepuce being involved, or even suspected of being involved in the disease, it should be carefully dissected away like the rest of the thickened tissue. Having exposed the penis, it is to be raised and carefully dissected out, with or without the prepuce as the case may be; it must be carefully held back, and out of the way of the next incisions, by an assistant, and care must be taken in clearing it out of the morbid tissue, not to divide the suspensory ligament, or difficulty will attend the subsequent treatment in keeping it in its proper place with reference to the testes, which may be drawn by the granulation and cicatrization above the penis.

“The next step is to make a deep and bold incision down to the tunica vaginalis on one side. In a large tumour

several incisions will be needed before the tunica vaginalis is exposed, which probably will be found much thickened and distended with quantities of fluid, forming large hydroceles. These should be laid open, and if the tunica vaginalis be much thickened, it should be removed; if not so affected, and the testicle not enlarged, it need not be interfered with. The testicle, with or without the covering, according to circumstances, is then, like the penis, to be dissected out and reflected, being held upwards with the penis; a similar proceeding is to be carried out on the opposite side, and then, the genital organs being held up towards the abdomen, the tumour is to be removed by connecting transversely the three vertical incisions already made, and then, either with the scalpel or the amputating knife, the remaining portion of the neck of the tumour is to be cut through: it is well before separating it, to mark out on the perinæal aspect by an incision, the line at which the removal is to be completed. During the operation the bleeding vessels are to be commanded by the fingers of assistants, and subsequently ligatures (twenty to thirty are frequently necessary) are to be applied: any large vein may be controlled by the bull-dog forceps. It is well that even the most minute bleeding points should be ligatured; otherwise, when reaction occurs, there may be hæmorrhage, and it may be necessary to remove the dressings, whereby much suffering is occasioned to the patient. The bleeding having been perfectly controlled, the testes, with their elongated cords, often extended to the length of a foot or even eighteen inches and much thickened, are to be raised and applied to the surface of the wound; the penis is to be enveloped in a fold of oiled lint, and thus kept apart from the testes, which are also covered and supported in position by oiled cloths."

In the 'Ephemerides Germanicæ' is an account of a scrotal tumour which weighed 200 lbs. This is the largest on record.

Finally, I would direct attention to a curious old painting

preserved in the Medical Museum of King's College (London), which represents a man suffering from scrotal elephantiasis. He is depicted sitting on a low seat, and making use of the flattened, upper surface of the tumour, projecting between his thighs, as a table, on which is deposited his food.

DESCRIPTION OF PLATE I.

Fig. 1. Clamp applied to the neck of swelling before the operation.

Fig. 2. Lines of Incisions ; viz., 1. Slitting up of prepuce. 2. Corona glandis. 3. Incision from above symphysis pubis to the penis. 4, 4. Incision on right side of growth. 5, 5. Same on left side. 6. Nodulated appearance of prepuce. 7. Circular incision around the penis to detach it from surrounding structures.

Fig. 3. 1, 1. Line of incision by transfixion. 2, 2, 2. Parts included in the first portion removed. 3. Penis dissected out, and held aside by an assistant. 4. Right testicle. 5. Large hernial sac. 6. Contents of sac.

Fig. 4. 1. Peritoneal covering. 2. Intestine. 3, 3. Seat of old adhesions. 4. Ligatures to opening. 5. Testicle. 6. Penis (after the operation).

Fig. 1.

Fig. 2.

Fig. 3.

Fig. 4.