

THE OS PENIS IN MAN AND BEAST*

by
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ONE OF THE most vivid recollections of my student-days is attending a lecture at the Royal College of Surgeons by Sir John Bland-Sutton. I can still see before me his tiny figure with the tiny hands and the beady eyes, standing behind a table piled high with divers strange-looking bones. Picking up a formidable specimen, as big as a policeman's truncheon, he brandished it menacingly above his head, expressing surprise that Samson should have chosen a new jawbone of an ass with which to slay a thousand Philistines—the os penis of a walrus would have made a much more suitable weapon.

Many animals normally possess a bone in their penis, called os penis or os priapi or baculum. This attains its greatest development in the whale in which it measures 2 metres in length and 40cm. in circumference at its base. In the walrus it is 55 cm. long. As the evolutionary ladder is ascended, the os penis progressively diminishes in size until in the anthropoid apes it has degenerated into an insignificant structure 10-20 mm. short. The chimpanzee, nearest akin to *homo sapiens*, has no proper os penis—merely a fragment of bone in the glans.

The location and shape of the penis bone vary considerably. In the dog it serves as a channel for the urethra, while in the bear and wolf it helps to support the penis, being essential in copulation. In the wolverine (glutton) it is forked at the tip, and in the racoon it is s-shaped and terminates in an enlarged condyle.

The Squirrel

The baculum in the squirrel shows striking differences in the various groups of species and has been used as a guide to the classification of these animals. In *Sciurus vulgaris* it is spatula-shaped, like a half-closed human right hand, the shaft forming the forearm, the blade of the spatula the hollowed palm, and a small pointed projection on the right corresponding to the outstretched thumb. In some species the baculum consists of two parts—a shaft and a separate blade, attached to it by a ligament and slightly movable upon it. The edge of this blade is exceedingly sharp and is practically uncovered by tissue of any sort. It has been somewhat fancifully suggested that its sole purpose is to perforate by a clean cut the extremely tough hymen of the female squirrel. Bland-Sutton thought this to be the earliest operation known to us—older even than the resection of a rib in the Garden of Eden.

The Otter

In the otter (*Lutra vulgaris*) the two divergent terminal knobs of the os penis are invested with a reflection of the prepuce which covers the glans, the termination of the urethra emerging in the interspace of what

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Bland-Sutton describes as the terminal condyles of the bone. The bone is extremely hard. It is not uncommon, however, to find specimens which have been broken and healed. Unless one is familiar with the habits of the otter, these fractures are difficult to explain. When male otters fight, they try to seize the external genitalia of their adversary. To anyone knowing what powerful jaws and sharp teeth these animals possess, the damage done to the bone need be no matter for surprise. Fortunately, in the majority of cases the bone repairs and the fragments unite.

In the General Pathology Section of the Museum of the Royal College of Surgeons there were two interesting specimens, blazed in the war, of the os penis of an otter and of a Pekinese toy dog. Each bone was bent about the junction of the anterior and middle thirds as a result of fracture, the injury having been completely repaired.

The objectionable habit of seizing one's enemy by the penis is not peculiar to the otter and the Pekinese toy dog, as witness *Deuteronomy* 25, 11 and 12 :

“When men strive together one with another, and the wife of the one draweth near for to deliver her husband out of the hand of him that smiteth him, and putteth forth her hand, and taketh him by the secrets :
Then thou shalt cut off her hand, thine eye shall not pity her.”

Is there a Human Os Penis ?

The os penis serves to assure a rapidly erectile state, for animals possessing such a bone have poorly developed erectile tissue. It is doubtful if man ever possessed an os penis. It has been suggested that he lost it in the course of the ages—fortunately for him, for rigidity, permanent or too easily obtained, might well have increased to madness the salacity of his species. No one has yet found convincing evidence of the mammalian os penis in the human penis. It is true that the erectile bodies of elderly men are a favourite site for the ectopic formation of bony plaques in the presence of arteriosclerotic changes or of syphilitic gummata. Despite much philosophic speculation such bone does not represent a phylogenetic structure ; there is nothing atavistic about it.

In animals the os penis is useful, being an aid to copulation. In man ossification in the penis is a nuisance, obstructing copulation. In animals the bone is typically situated in the glans ; in fact, it is said to occur only in those mammals which possess a glans. In man ossification takes place in the shaft of the penis. In animals the bone is single, while in man ossification is often multiple.

Gout of the Penis

In 1891 Sir James Paget in his *Studies of Old Case-books*, p. 18, stated that :

“ many examples of permanent hardening of the erectile structure or of its sheath seem to be connected with habitual and incomplete gout. This is especially true of those tough thickenings of portions of the fibrous sheath and septum which produce curvings upwards or sideways during erection. The toughened structure is very like that of the usually gouty, contracted palmar fascia, which is common in many who can ascribe no local cause for the change. I have once seen similar changes in both the penis and the hands of the same gouty person.”

It is interesting to recall that seven years previously H. C. Cameron (*Lancet*, 1884, 1, 841) had reported a case of gouty tumour of the penis in "an unmarried gentleman, in easy circumstances, and considerably past middle life," who also had a fibrous tumour in the palm.

Peyronie's Disease

This curious pathological condition, variously known as fibrosis of the corpora cavernosa, fibrous cavernositis, fibrous plaques of the penis, and plastic induration of the penis, was first described by François de La Peyronie, First Surgeon to the King and founder of the Académie Royale de Chirurgie, in *Mémoires de l'Académie Royale de Chirurgie*, 1743, t. 2, part 2, 318-33, in a communication entitled "*Mémoire sur quelques obstacles qui s'opposent à l'éjaculation naturelle de la sémençe.*" On page 331 he speaks of "tumeurs dures formées dans les corps caverneux"; on erection "la verge décrivait un arc courbé vers la partie supérieure du pubis."

The aetiology of what has since become known as Peyronie's disease remains obscure. Among the causative or contributory factors the following have been mentioned—diabetes, gout, arteriosclerosis, lympho-granulomatosis inguinalis, syphilis, fibroplastic diathesis, vitamin E deficiency, and—this is the excuse for introducing this subject in the present paper—an atavistic tendency, representing the os penis of animals. An interesting case of "Peyronie's disease—strabisme du pénis" was reported by J.W.W., Jr., in *Boston Medical and Surgical Journal*, 1903, 148, 245:

"Mr. Editor: An old codger of about 65 years came in one day and casting a furtive glance about the room, shut the door with great deliberation. To my question: "What is the matter?" he replied, "Squint of the cock." . . . A widower for some years, he was anxious to marry again, but was afraid to do so on account of a most remarkable change in his yard. When erect it curved to one side in such a way as to form a semicircle, hopeless and useless for any practical purposes. . . . Examination showed at one side of the root of the penis a firm induration about the size of a cherry, so placed as to completely fill a part of one corpus cavernosum. Of course, on erection blood filled the other corpus only, and in consequence the penis curved towards the affected side, producing the *squint* of which he spoke. . . ."

Some Cases of Ossification in the Human Penis

In 1933 V. Vermooten (*New England Journal of Medicine*, 1933, 209, 308) reported as a curiosity what he believed to be the first human case in the literature of "Metaplasia in the penis: the presence of bone, bone marrow and cartilage in the glans." His patient, aged 19, gave this astonishing history: three months previously a revolver bullet had entered his left buttock, emerged on the inner aspect of the thigh, then passed through the scrotum and shaft of the penis, and, so far as he knew, became lodged in the left half of the glans. In this position a very hard mass was felt on the dorsum. When excised, it was found

to be—not shrapnel, but bone with bone-marrow and cartilage. The site of the island of bone was that of the former injury to the glands; presumably ossification had taken place in fibrosis resulting from this injury.

In 1844 K. F. Hecker (*Archiv für Physiologische Heilkunde*, 1844, 3, 269) tried unsuccessfully to excise an “Exercierknochen” from the penis of a combmaker, who nine months previously had been hit by a 60 lb. iron bar.

Earlier still, in 1828, McClellan (*Lancet*, 1828, *i*, 714) had reported complete ossification of the septum of the corpora cavernosa in a man aged 52. The penis was described as peculiarly excitable so that the slightest handling produced an immediate erection, in which state it assumed the form of a semicircular bow, with the concavity upwards. On excision the ossified septum grated audibly against the scalpel, ruining its edge.

A. G. Gerster and F. S. Mandlebaum (*Annals of Surgery*, 1913, 57, 896) reported the case of a French restaurant keeper aged 49, who had a small indurated mass on the upper aspect of the root of the penis. “The presence of this body caused the patient no inconvenience whatever, except in erection of the penis, when an increasing amount of upward incurvation acted as an insurmountable obstacle to the introduction of the organ into the female genital tract.” The mass—3½ cm. long, 1¾ wide, 2-3 mm. thick—was dissected away from the tunica albuginea and septum penis, and the defect in the tunica was sutured. The X-ray shadow formed “a serpentine meander wound about a longitudinal staff, remotely comparable to the Aesculapian symbol.” The term “strabisme pénien,” often ascribed to Peyronie, is attributed to Philippe Ricord by Tuffiet (*Annales des Maladies des Organes Génito-Urinaires*, 1885, 3, 411) in a paper “Sur l’induration des corps caverneux” : —“Si l’induration est limitée à l’un des côtés de la verge, le pénis se dévie latéralement, il louche, c’est un véritable strabisme pénien (Ricord).”

An Artificial “Os Penis”

R. Gutierrez (*Journal of Urology*, 1943, 49, 865) reports the bizarre case of a New York salesman aged 50, who at a party, while under the influence of drink, allowed a girl to insert into his urethra a “long crystal highball stirrer of a fairly good size, in an effort to produce a continuous erection.” This was presently removed and replaced by a larger one, 16 cm. long and 1 cm. wide at its end, which he was afterwards unable to extract. For seven days he had a continuous painful erection and difficult, painful urination. Open operation was required for the removal of this “os penis.”

Specimens in the College Museum

Q. 436.1—Bladder and penis of a bear, injected and dried. (Hunterian, old number 532, dried preparations.)

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Q. 431.1—Urethra, penis, and lower half of bladder of young walrus (*Odobaeus rosmarus*). The penis is cylindrical. Its distal half consists chiefly of bone—the os penis. This preparation is made from an animal that died in the Zoological Gardens in 1867. (Old catalogue number 2519A.)

Other References

- GOULD, G. M. and PYLE, W. L. (1897) *Anomalies and curiosities of medicine*. London.
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HILL, W. C. OSMAN and HARRISON-MATTHEWS, L. (1949) The male external genitalia of the gorilla, with remarks on the os penis of other hominoidea. *Proc. Zool. Soc. Lond.* **119**, 363.

MONTHLY DINNERS

Monthly dinners are held in the College on the Wednesday before the second Thursday of each month. The following are entitled to attend with their guests: all Diplomates and students of the College and Members of the Associations linked to the College through the Joint Secretariat. It is not necessarily intended that guests should be members of the medical profession.

The dinners will be at 7 p.m. on the following Wednesdays: July 9, October 8, November 12 and December 10, 1952.

The cost is £1 10s. 0d. which includes cocktails before dinner and wine at the table. Applications for tickets, accompanied by a cheque for the appropriate amount, must be sent to the Deputy Secretary at least a week before the date of the dinner. Cheques should be made payable to "Royal College of Surgeons of England." The dress is Lounge Suit.

DIARY FOR JUNE 16th-30th

Mon. 16	3.45	Mr. P. H. Mitchiner—Arnott Demonstration.—The Salivary Glands.*
	5.00	Dr. M. Kremer—The Frontal Lobes.
Tues. 17	3.45	Prof. J. D. Boyd—The Development of the Heart and Circulatory System.
Wed. 18	3.45	Prof. J. D. Boyd—The Development of the Genito-Urinary System.
	5.00	Board of Faculty of Anaesthetists.
Thur. 19		D.P.H. Examination (Preliminary) begins.
	3.45	Prof. R. J. Last—Arnott Demonstration.—The Larynx.*
	5.00	Dr. M. Kremer—Referred Pain.
Fri. 20		D.P.M. Examination (Part II) begins.
	3.45	Prof. J. D. Boyd—The Development of the Nervous System.
Mon. 23	3.45	Prof. J. D. Boyd—The Development of the Pharyngeal Derivatives and Endocrine Glands.
Tues. 24		Final Membership Examination begins.
	3.45	Prof. M. C. Lucas Keene—The Ventricles of the Brain.
Wed. 25		First L.D.S. Examination begins.
	3.45	Prof. J. Whillis—The Muscles of the Foot.
Thur. 26		D.P.H. Examination (Final) begins.
	5.00	Prof. Arnold Sorsby—Ophthalmology Lecture—The Nature of Congenital Anomalies.*
Mon. 30	5.00	Dr. Peyton Rous—Imperial Cancer Research Fund Lecture—The Long Pull in Cancer Research.
		Basic Sciences lectures and demonstrations for dental students begin.

DIARY FOR JULY

Tues. 1	5.00	Sir Max Page—Robert Jones Lecture—The effects of War on Surgical Practice.*
Wed. 2		Final F.D.S. Examination begins.
Thur. 3	4.45	Dr. Leo Mayer—Moynihan Lecture.*
	6.00	Prof. D. Slome—Otolaryngology Lecture—The Evolution of Modern Tendon Surgery.*
Mon. 7		Clinical Conferences begin.
Tues. 8		Buckston Browne Benefaction.
		Demonstrations at the Buckston Browne Farm.
	5.00	Prof. D. Slome—Buckston Browne Lecture.*
	8.00	Buckston Browne Dinner.
Wed. 9		D.O. Examination begins.
	5.00	Dr. Peyton Rous—Imperial Cancer Research Fund Lecture—Carcinogenesis.*
	7.00	Monthly Dinner.