

## Section of Urology

President W S Mack FRCSED

Meeting October 24 1963

### President's Address

#### Ruminations on the Testis

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The testicle has always interested man from the earliest times and there are frequent overt references to it in myth and religion but, because it forms one of the private parts, references are often evasive, euphemistic or even downright misleading and false, thus making exact interpretation difficult. Two examples of this kind of thing might be quoted, both from works of accepted rectitude: in the Authorized Version of the Bible (Genesis xlvii, 29–31) the aged Jacob, knowing he was about to die, called his son, Joseph, to him and said to him: 'If now I have found grace in thy sight, put, I pray thee, thy hand under my thigh, and deal kindly and truly with me; bury me not, I pray thee, in Egypt: But I will lie with my fathers, and thou shalt carry me out of Egypt, and bury me in their buryingplace. And he said, I will do as thou hast said. And he said, Swear unto me. And he sware unto him. And Israel bowed himself upon the bed's head.' Obviously a most solemn oath was being exacted here but the translators of the Bible have, by the phrase 'under my thigh', concealed the fact that Joseph was taking it by placing his hand on the testicles. He was, in other words, testifying. The taking of an oath in this way was the fashion for centuries and probably gave rise directly to the Latin word 'testis' a witness. Yet, to give the second example of evasion, the Shorter Oxford Dictionary states that Testis (1) is the Latin word for witness but Testis (2) = testicle is of uncertain etymology.

Many old writings about the male organs add to the confusion by not specifying clearly whether they mean the penis or the testicles or both; Freud (1933) has shown the almost incredible extent to which symbolism can be carried in representing the genital organs in myth, folk-lore and in dreams; even the sacred number three is symbolic of the whole male genitalia according to

him. Nor has the process of symbolization stopped with primitive man and woman who dreamt of sticks and serpents; now such images as revolvers, aeroplanes, rockets and space-ships more or less effectively conceal from the slumberer his real thoughts.

Prehistoric man had a hard struggle for existence and must often have been hurt and wounded so that a crude type of surgery would become a necessity. Man has always been inquisitive and destructive and in his early battles with other tribes would tend to kill the vanquished rather than have them live on, a burden and a menace, in his dwelling place. Some prisoners were spared, though they might be rendered harmless by having an arm cut off; we can only surmise that others were humiliated by amputation of the symbols of virility. Many of these must have died from hæmorrhage, especially if the penis were removed, but some would survive and it must then have dawned on some early genius that such people were of infinitely greater use about the camp than those minus a hand; they were able-bodied, strong yet docile and no longer a nuisance to the women. We can then surmise that the next step would be to cut off only the testicles, thus reducing the mortality rate; perhaps boys were so treated in the first instance. However it came about, some astute observer must have watched with interest the differences in bodily configuration: the increased fat, the loss of aggressiveness, the pitch of the voice and the almost feminine characteristics of these first eunuchs. Either he or someone else must then have wondered whether a similar operation might not solve the almost impossible problem of herding the cattle where more than one bull was present. We do not know for certain how castration was first evolved in man and beast but we have clear evidence that it was used in China, as a punitive measure, as far back as 1100 BC and eunuchs were common in the Assyrian Empire; their smooth faces form a striking contrast to the bearded kings and warriors in the extant carvings of that period (Andrews 1898).

Deliberate removal of the testicles either as a punishment or for creating eunuchs has never been a popular Western custom but, in the Orient, it has been practised extensively for various purposes for many centuries. In the early Roman Republic castration was a punishment for adultery or rape and in England during the reign of Henry VIII it could be used for various sexual offences (*Urol. cut.* 1935). It is interesting to recall that at the time of Mussolini's invasion of Ethiopia his soldiers were terrified of being taken prisoner since a threat had been made that, if poison gas were used against them, the Ethiopians would retaliate by castrating all Italian prisoners. In contrast to most of the Near-Eastern races and religions the ancient Israelites, who had accepted circumcision, sternly forbade castration either of man or of beast. Any man who had his penis or testicles damaged or cut off could not enter the congregation (Deuteronomy xxiii, 1) and no one could be a priest if he had his stones broken (Leviticus xxi, 20). Any woman who attempted to help her husband in a fight by taking hold of his opponent's testicles could have her hand cut off for this (Deuteronomy xxv, 11-12). Yet there are constant references in the Old Testament to eunuchs, particularly at the time of the Captivity; Daniel was selected along with other healthy and skilful Israelite children by the master of the eunuchs of Nebuchadnezzar for special training in the king's palace (Daniel i, 3-4).

#### *The Making of Eunuchs*

The manufacture of eunuchs has ceased only in recent times, if it has indeed ceased. The demand at one time was high. The Emperor of China had 3,000 in his establishment, there were many in the Turkish Empire and in parts of the Indian Empire while, in the eighteenth and nineteenth centuries, singers were still required for the Opera and for the Vatican Choir. There were really two distinct types of eunuch for commercial purposes: in the Orient where the eunuch was, as his name implies, a 'bed-watcher', complete removal of the penis and testicles was essential if he were to be employed in the harem whereas, in the West, where voice production was the aim in view, destruction of the testicles by some means or other was all that was required. Thus we can differentiate between (1) *true castrati* from whom both testicles and penis have been amputated and (2) *spadones* where only the testicles had been removed; two other sub-groups existed, (3) *thlibiae* where the testicles had been destroyed by crushing and (4) *thlasiae* where the cord had been cut (Havelock Ellis 1936). In veterinary practice, depending on the size, age and anatomy of the animal, modifications of the last three methods

are employed at the present day (Bowden 1962, Clark *et al.* 1959). Not all castrations, especially in sheep, are done by veterinary surgeons; old-fashioned methods which are crude but effective are still used by many shepherds (Hobday 1914).

It is difficult to get exact information about the methods employed in preparing eunuchs for the market or even to discover where the operators worked. In the Turkish Empire most of the boys were operated on at a Coptic Monastery in Upper Egypt and probably only one in three survived the operation (Andrews 1898). In Bengal gangs of eunuchs, who earned their living by looking after women or acting as sodomites, bought and castrated boys themselves (Duka 1866). In Italy, where the practice was forbidden by the Church and by civil laws, Bologna appeared to be the main centre of production though most were trained in voice production in Naples (Heriot 1956). Methods probably differed widely throughout the world but were often extremely crude though ligatures and special clamps were utilized to prevent hæmorrhage. The death rate was high in complete removal, healing was tedious and contracture of the new external meatus was common.

#### *The Effects of Castration*

It is not often that castration is indicated nowadays for therapeutic reasons in boys or young men though Hammond (1934) saw seven patients who had had removal of both testicles for tuberculosis; epididymectomy and chemotherapy have obviated the need for that. Removal of the testicles and penis may be required for an extensive carcinoma of the penis and appears to be preferred by French surgeons (Marion 1935) on the grounds both of ensuring a more thorough ablation of the disease and of being better psychologically since, if left, they 'merely serve as sad and silent witnesses of a function that has gone for ever' (Hammond 1934). Bilateral orchidectomy for malignant prostate is practised widely but, since the patients are often elderly and since they are frequently given stilbæstrol as well, it is misleading to draw comparisons between this group and the others; Ellis & Grayhack (1963) have nevertheless shown that a certain number of men remain potent after such treatments for cancer of the prostate. It seems certain that removal of the testicles in the adult male need not be followed by impotence. Numerous factors must be taken into account but from various reports many castrated men who have been experienced in sexual intercourse before operation retain both desire and ability for intercourse after they have lost their testicles.

It seems likely that those who become impotent do so because of psychological factors or for lack of opportunity (Money 1961). If castration is done before puberty there would seem to be a strong likelihood that the patient might be impotent unless replacement therapy were given; certainly many boys suffering from prepubertal hypogonadism do require testosterone before they are able to obtain erections. Some of the Roman poets, including Juvenal, made great play with the fact that the spadones were by no means impotent; according to them they were much sought after by the Roman matrons who could thus satisfy their sexual desires without the necessity for an abortion afterwards.

It is well known that certain groups of hypogonad males, particularly those with chromatin-positive Klinefelter's syndrome (Mack 1960), do contain an unduly high proportion of mentally subnormal individuals but castration, in itself, has no deleterious effects on a man's mental capacity. Some extremely outstanding intellectuals have been castrates. Peter Abélard (1079–1142) was made so by Fulbert, canon of Notre-Dame, after he had seduced the latter's niece, Héloïse; Abélard became one of the greatest scholars of his time. Origen (186–253), a most eminent early Christian theologian, believed that castration would help him but regretted this afterwards as he was denied promotion in the Church because he was a eunuch. Many very able eunuchs helped in the administration of the Byzantine Empire and one of them, Narses, was a brave and brilliant general at the time of Justinian; he defeated the Goths and was for a period governor of Italy. Indeed, Gibbon in his 'Decline and Fall of the Roman Empire' appears to go out of his way to stress how notable and prominent the eunuchs of the Eastern Empire were. Perhaps Gibbon's views were coloured by the fact that he must have been testicle conscious, carrying about with him as he did an enormous hydrocele for over thirty years – a hydrocele which, when it was eventually tapped by Cline, contained four quarts of fluid at the first paracentesis and refilled within two weeks to yield six quarts; by this time it was infected and caused his death in 1794 (MacLaurin 1930). In modern times Christopher Hassall (1959) has depicted sympathetically, in his life of Sir Edward Marsh, how an attack of mumps rendered Marsh eunuchoid and 'determined the colour of his personality and the course of his life so fundamentally that one cannot wish it to have been otherwise although the result was a disability . . . there are no grounds for supposing that he grieved that he was to be incapable of the act of love, or minded at all that he was destined to live and die as chaste as the day he was born. It enabled his

affections to grow more intensely in the mind, and as a result he cultivated a capacity for friendship which, untroubled by physical desire, could develop into a devotion characteristically feminine in its tenderness'. This brilliant masterpiece of biography of a man who was the private secretary of Sir Winston Churchill for twenty-three years shows up better than anything I know to what heights of achievement a human being may rise even though he be eunuchoid.

#### *Castration and Religion*

The theme of castration appears in many religions, particularly those emanating from the Near East, and seems to be fundamentally a fertility rite bound up with the adoration of the Great Mother Goddess. It is probable that the peculiar story of the emasculation of Uranus by his son Cronus, in Greek mythology, was borrowed from the Hittites who had a rather similar account (Graves 1955). There were several religions where the goddess was attended by eunuch priests; the one that gained most adherents, for it was actually imported into Rome itself towards the close of the war against Hannibal in 204 BC, was that of the Phrygian goddess Cybele: her lover was the youth Attis who, because of a misdemeanour, castrated himself under a pine tree; the priests of the cult were eunuchs. The great spring festival of Cybele and Attis was held in Rome and elsewhere towards the end of March and is brilliantly described by Sir James Frazer in 'The Golden Bough' (Frazer 1922). As the ceremony reached its height the worshippers were whipped up to such a state of fervour and religious ecstasy that many a young man 'did that which he little thought to do when he came as a holiday spectator to the festival. For man after man, his veins throbbing with the music, his eyes fascinated by the sight of the streaming blood of the eunuch priests who slashed themselves, flung his garments from him, leaped forth with a shout, and seizing one of the swords which stood ready for the purpose, castrated himself on the spot. Then he ran through the city, holding the bloody pieces in his hand, till he threw them into one of the houses which he passed in his mad career'.

This cult was incorporated into the established religion of Rome and, though no places of worship have been identified in this country, it is more than likely that the legions brought it with them and that a temple existed in London. Dr Alfred G Francis in a paper read before the Section of the History of Medicine of this Society in 1926 (Francis 1926), describes a clamp in the British Museum which had been found on the bed of the river Thames near London Bridge in 1840.

This clamp was elaborately decorated and its function was unknown but he had no doubt that it was a castration clamp used in the rites of Cybele. The fact that such a clamp existed would appear to prove conclusively that, though eunuch priests were enlisted at the time of the Spring festival, the supply of properly prepared young men for the service of the goddess was kept going by unemotional surgical means. It is indeed difficult to credit that any man who had just castrated himself would be in any fit state to run about the streets immediately afterwards but his fervour must have been great enough to supply energy for him to do so.

The Early Christian Church had a stern struggle to establish itself against rival religions, particularly Mithraism and, to a lesser degree, the worship of Cybele. The Church did undoubtedly borrow some of the customs of these faiths which may explain why some of its early priests were castrated but, at the Council of Nicæa in AD 325, a decision was taken that prohibited admission of castrates to the priesthood (Hammond 1934). Later a most peculiar Christian sect arose in Russia about 1757 called the Skoptzies (Gould & Pyle 1898). They believed, probably from a misreading of Matthew xix, 12 – ‘For there are some eunuchs, which were so born from their mother’s womb: and there are some eunuchs, which were made eunuchs of men: and there be eunuchs, which have made themselves eunuchs for the kingdom of heaven’s sake. He that is able to receive it, let him receive it’ – that castration made them more worthy of the Kingdom of Heaven. The majority of the sect had undergone the ‘first purification’ by ablation of the testicles and scrotum and were said to have lost the ‘keys of hell’ but to have retained the ‘key of the abyss’; the higher ranks, ‘the bearers of the Imperial seal’, had sacrificed the penis as well.

### *Castration and Singing*

Italy has been the singing nation from the fourth century until the present day largely because of its language, the interest of the Roman Church in music and the passion of the Italian people for opera (Scholes 1938). St Sylvester, who was Pope from 314 to 336, founded an official school of song in Rome and boys were used in church choirs but were always a nuisance because their voices were apt to break at the wrong time. About the end of the fifteenth century Spanish falsettists supplemented the boys’ voices but, as vocal styles became more florid, castrati appeared in large numbers about 1600 and thereafter became so popular that they virtually dominated the scene. It was in opera that they achieved their greatest

fame for this form of entertainment swept across Europe and was immensely popular with all classes. The castrate voice preserved all the purity of the boy’s tone and was, of course, permanent, many of the great singers being able to perform until their 50s and 60s. Italian opera was the only kind that mattered until the late eighteenth century and at this time it became more and more artificial and often a mere excuse for a series of elaborate arias sung by the castrati. They were international figures who behaved as temperamentally as any modern film star and had huge followings in all the main European capitals including London. Dr Burney, Johnson’s friend, was much pleased by them and Goethe thought that they ought to oust actresses in every type of theatrical production. Pepys makes a few passing references to singing eunuchs and tells how one was hissed off the stage at a performance of Davenant’s opera ‘The Siege of Rhodes’ because he was so much out; fortunately there were compensations for the audience since a board broke over their heads and a great deal of dust fell into the ladies’ necks and the men’s hair ‘which made good sport’ (July 2, 1661). Various great composers wrote for the castrati including Handel and Mozart.

Angus Heriot (1956) in his enormously entertaining ‘The Castrati in Opera’ has collected a vast amount of information about this fascinating subject. Most of the castrati were of humble origin but one at least, probably the most outstanding of all, Farinelli (1708–82), came of an aristocratic family; he appeared in London for several years in the 1730s and then went to Spain where his singing every night helped to keep Philip V’s melancholia in check. Obviously many of the castrati were not impotent and some of them got into serious trouble because of their interest in women. Heriot quotes Casanova’s interview with Tenducci who had eloped with an Irish heiress and had become the father of two children. Tenducci maintained that this was so because he had originally had three testicles and one had escaped at the time of his operation.

But tastes changed and the rise of comic opera, especially that of Rossini, meant the end of the castrati in this field. Velluti (1781–1861) who sang in London in 1829 was the last well-known one so far as the stage was concerned. Ironically it was in the Vatican which officially frowned on the practice that they lingered longest. Domenico Mustafa who died in 1912 was director of Papal music until he retired in 1895 and the last of all, Alessandro Moreschi, lived till 1922 and was sufficiently in our period to have made gramophone records which have been played in the Third Programme.

### *Castrati and the Stage*

Eunuchs have been featured in many plays and operas throughout the centuries generally as figures of fun. One feels that Osmin, the pasha's overseer, in Mozart's 'Il Seraglio' ought to be a eunuch and indeed he is often got up to look like one though he is a bass and is very much interested in the ladies. It is perhaps appropriate to mention that eunuchs have reappeared on the London stage at present in what is reported to be a modification of a Roman comedy and that they are still figures of fun – with their characteristics picked out by such remarks as 'Don't you lower your voice to me' directed to one of them. But probably the most extraordinary eunuch in the English Theatre, if only because he is not one, is Mr Horner, the hero of 'The Country Wife' by Wycherley (1640–1716). Only in Restoration comedy could one have a hero who returns to London deliberately spreading the rumour that he has been castrated in France, which arouses the mirth of the men and the horror and contempt of the women but allows the hero to achieve his purpose with the ladies without arousing the suspicions of their husbands.

Numerous other references to the testicle can be found in literature of various kinds. The aged Brown-Séquard tried to rejuvenate himself with testicular extracts and Voronoff pursued the same search for the elixir of youth by implanting the testicles of chimpanzees into his elderly clients. Although Steinach's two types of ligation were aimed primarily at relieving prostatic obstruction a certain degree of rejuvenation was also claimed for the operations. Castration for simple enlargement of the prostate enjoyed a brief vogue at the end of the last century.

The phallus and the testicles were prominent in the early fertility religions and were carried on into the witch cults, devil worship and Black Mass of later times. Elaborate initiation ceremonies, with the genitals playing a prominent role, were a feature of the various 'rake-hell clubs' popular with the aristocracy and politicians of England in the eighteenth century. John Wilkes, whom Dr Johnson detested but with whom he had a memorable meeting on May 15, 1776, was an original member of Sir Francis Dashwood's brotherhood at Medmenham. Even Scotland, much more circumspect about such matters, had at least one similar body in the Beggars Benison Club of Anstruther, the title being taken from an adventure of James V, the 'Gaberlunzie King'. It is indeed impossible to imagine a world in which man will not continue to be deeply concerned about such an important organ as the testicle. Medically, interest has been intensified with the

advent of sources of damage to the germinal cells unthought of fifty years ago; much of the recent work on chromosomes was carried out on the testicle. Studies on transplantation are going on and, while it may be some time before it is possible to replace a missing testicle with a functioning organ, the empty scrotum can be fitted out with a prosthesis thus banishing psychological trauma. Prentiss and his colleagues have reviewed the literature and put forward their own views (1963). In their opinion silicone rubber is best since it is easily shaped, easily sterilized and feels like a normal testis. The cost of silicone too, at \$4 a pair, is very much less than vitallium where the initial price and the difficulty of moulding may involve an expense of \$75 for a substitute that is hard and unyielding, a poor simulacrum of one of Nature's masterpieces.

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*Urol. cut. Rev.* (1935) 39, 886

Meeting November 28 1963

The following specimens were shown:

**Urinary Retention caused by Fibromata**  
Mr Richard Shaw

**Leiomyosarcoma of Bladder Mistaken at Two Hospitals for a Tuberculous Ulcer**  
Mr H N G Hudson

**Large Retroperitoneal Fibrosarcoma causing Right Hydronephrosis successfully removed from a Woman aged 83 years**  
Mr J Gabe

(1) Calculous Pyonephrosis presenting as a Psoas Abscess (2) Hanging Bladder Stone following Hernia Repair  
Mr Norman Slade

**Amyloidosis of the Bladder**  
Dr R C B Pugh

**Two Cases of Urethral Diverticula**  
Mr Rowley Gale (for Mr Neville Stidolph)

**Tumefactive Xanthogranulomatous Pyelonephritis with Nephrotic Fistula**  
Mr J P Blandy (for Mr A R C Higham)

**Ectopic Multicystic Kidneys**  
Dr John Woodward  
(for Mr D Innes Williams)

**Malignant Pararenal Dermoid Cyst**  
Mr J N Ward-McQuaid

## Books received for review

**Bernier J J & Paupe J**  
Glucides. Physiologie et biochimie normales et pathologiques  
pp xii + 249 illustrated 52 F  
Paris: Masson 1963

**Bourne G H (ed)**  
World review of nutrition and dietetics  
Volume 4 pp 162 60s  
London: Pitman Medical 1963

**Brunn W A L von**  
Medizinische Zeitschriften im neunzehnten Jahrhundert  
pp 95 DM 9.60  
Stuttgart: Georg Thieme 1963

**Case R A M, Coghill C, Harley J L & Pearson J T**  
The Chester Beatty Research Institute serial abridged life tables: England and Wales 1841-1960 Part 1 pp xxvi + 87  
supplied gratis to workers in fields concerned  
London: Chester Beatty Research Institute 1962

**Darling D B**  
Radiography of infants and children  
American Lecture Series No. 477  
pp xv + 193 illustrated \$16.50  
Springfield, Ill.: Charles C Thomas 1962

**Kretschmer E**  
Gestalten und Gedanken pp 223 DM 28  
Stuttgart: Georg Thieme 1963

**McHardy G G**  
The medical treatment of peptic ulcer  
American Lecture Series No. 542  
pp viii + 78 \$4.75  
Springfield, Ill.: Charles C Thomas 1963

**Marks P A & Seeman W**  
Actuarial description of abnormal personality  
pp xxv + 331 60s  
Baltimore: Williams & Wilkins 1963  
London: Baillière, Tindall & Cox

**Medes G & Reimann S P**  
Normal growth and cancer  
pp xiv + 268 65s  
Philadelphia & Montreal: J B Lippincott 1963  
London: Pitman Medical

**Merkova A M, Tserkovnogo G F & Kaufman B D (eds)**  
Morbidities and mortality from malignant neoplasms in the USSR  
translated by K Syers  
English edition ed J G Dean  
pp xxiv + 37 7s 6d  
London: Pitman Medical 1963

**Parnas J**  
Brucella phages, properties and application (Bibl. microbiol. Fasc. 3)  
pp 60 illustrated 35s  
Basle & New York: S Karger 1963  
London: Pitman Medical