Physiology-reproductive system and hypospadias essay sample

ASSIGN BUSTER

The male reproductive system and hypospadias.

The main focus of this essay is to explore, if any, the physical effects that hypospadias can have on the male reproductive system. Through investigation of websites and articles, the aim is to raise awareness of the defect whilst also describing the aetiology or symptoms along with any known, long and short term effects. The everyday function of the male reproductive system is to produce, store and transport sperm and semen and to discharge sperm into the female vagina for fertilisation to occur. The male reproductive system is also responsible for producing the male sex hormone, testosterone.

Hypospadias is an abnormality of the urethra and penis which can cause problems with passing urine and erections (patient. co. uk). According to Greek terminology, the meaning of hypospadias is broken down as follows; hypo meaning " under" and spadon meaning " a tear". (hypospadiasUK. com) Hypospadias is a relatively common condition which, according to the website Hypospadias UK, can affect 1 in 300 male babies. Different manifestations of hypospadias can appear, depending on the moment when, during the embryonic development of the phenotypic masculine sex, the different fusion processes which form the urethra are disrupted (hypospadias-emotions. com (Larsen, 1996)). Interruptions during this development can affect the severity of the condition and in more severe variations, the penis may display a " downward tilt" otherwise known as " chordee". This congenital defect, meaning the symptoms are displayed at birth, presents in one of the following ways in varying degrees of severity: • subcoronal – urethra opening is located near the head of the penis •

midshaft – urethra opening is located along the underside of the shaft of the penis • penoscrotal – urethra opening is located at the junction of the penis and scrotum (cdc. gov)

Information from the website, Hypospadias UK, suggests that there are a few reasons as to why this defect occurs. In some cases, it is passed down through male relatives and therefore classed as hereditary. Due to the sensitive nature of the condition, it is rarely discussed in families and so it may be unclear as to which family member may have passed the defective gene through the male line. There may also be a link with certain drugs taken by the mother during pregnancy. These include; anti-epilepsy drugs, Valproic acid and Phenytoin

female hormone, progesterone (given as part of IVF treatment) DES (diethylstilbestrol) a miscarriage preventative used up until the 1970's Clomiphene, used in IVF to promote ovulation.

The short and long term effects of hypospadias vary widely and are usually down to individual perception. As this condition is a structural malformation, there is little risk of link to any other serious illness. However, there may be a higher risk of urinary tract infections as the positioning of the urethra opening may be more exposed to infection. The " subcoronal" type defect has less interference with reproduction as the sperm can still be ejaculated into the vagina as intended. However, as shown in image 1, there is a hugely reduced chance of reproduction occurring naturally due to the location, either " midshaft" or " periscrotal", of the urethra opening which transports sperm for fertilisation to take place. In many cases of hypospadias, there are

also reports of cryptorchidism or “ undescended testicles”, which can affect fertility in males. Corrective surgery is readily available for patients, especially in more extreme cases where chordee is also present. This “ downward curvature of the penis” can affect intercourse and cause inhibitions to the sufferer. During the corrective procedure, the aim is to close the opening of the urethra in it’s hypospadiac opening and to lengthen the urethra to ensure it exits the glans or head of the penis in the idealistic position.

Slight chordee may still be present after the surgery but usually much less dramatic in appearance. Many of the surgical procedure candidates with the midshaft or periscrotal form of the condition would gain significantly from the corrective surgery, ensuring a higher success rate for natural reproduction to take place during intercourse and of course the added ability to urinate whilst standing, as preferred by males but frowned upon by females! For the surgery to prove most effective, it is best practice to perform the corrective procedure on young males, preferably between six months and two years of age. There are some urologists who will wait until the patient is three years of age. The corrective procedure can be performed on older males however, in adolescent or adult males the surgery can induce physical, post-operative complications due to the likelihood of errection rupturing the surgical site. The surgery undertaken by many males with the subcoronal deformity is purely for aesthetic purposes as it gives the penis a more “ normal” appearance, thus helping to eliminate the psychological factors ie; inadequacy, “ peer pressure” and sexual inhibitions that may occur without surgery.

There is also supporting evidence that the condition can have long term psychological effects and feelings of inadequacy. Obviously a penis with hypospadias differs from what is generally thought to be the “ norm” (hypospadiasuk). Everyday bodily functions such as passing urine will be affected. Almost all males with the condition will experience difficulty in passing urine and will consequently have to sit down to urinate. This can be overcome by retracting the “ hood” or foreskin to expose the urethral opening to give better “ aim”, although in the more severe midshaft or penoscrotal deformities this would be impossible to achieve. The location of hypospadiac openings can also contribute to urinary tract infections, as the uncovered opening is more exposed it is more susceptible to infection.

In conclusion to the findings in this essay, it would suggest that the long term psychological factors of hypospadias far outweigh the short term physical and reproductive dysfunctions. As the short term effects are fairly easily resolved through surgery performed on candidates at a young age, this would benefit the patient for medical reasons and healing purposes. In the young it is perhaps less likely to instill psychological fears of imperfection of the penis and prevent the sexual inhibitions which follow in adult life when faced with this condition. In addition, it is also said that not all men have the same psychological emotions and hang-ups and are happy to go through life without the need for corrective surgery for aesthetic reasons.