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Andrology

An-drol'-uh-jee

The study of the functions and diseases specific to males, especially of the reproductive organs

>> FROM THE DIRECTOR

Undescended testes (or cryptorchidism) is a condition when one or both of the testes do not lower into the scrotum within six months after birth. Instead, the testes stay in the abdomen or move only part way down.

Affecting around five per cent of all baby boys at birth, this number drops to around two per cent after six months as the condition often corrects itself in this time. If the testes do not descend into the scrotum, the condition must be treated with surgery or hormone therapy as undescended testes can lead to reproductive health problems later in life.

Men born with undescended testes are at a higher risk of infertility, testicular cancer, testicular trauma, hernia and if it is not corrected they may also suffer a poor self image due to the abnormal appearance of the scrotum.

As the condition is normally treated at such a young age, many men who had undescended testes are unaware about the possibility of these disorders. It is important that they are informed about the condition and made aware of the associated risks that may present in later life.



Professor David de Kretser

Increased rate of undescended testes found

Debate on whether or not men have declining sperm counts continues in the international scientific community. Not only is sperm count being questioned, but also the increased rate of testicular cancer and undescended testes. Research published in 2004¹ suggests that there is an increase in the incidence of these reproductive health disorders, and that this may be linked with the environment.

This research was based on previous studies that found men from Denmark had lower semen quality and a much higher rate of testicular cancer than men in the neighbouring country of Finland. Undescended testes is linked to both low semen quality and testicular cancer later in life, and this led the authors of this recent research to compare the number of boys born with undescended testes in Denmark and Finland.

Boys were checked at birth, three months and 18 months of age and the research shows that Denmark had a higher rate of undescended testes at each specified age. These findings support previous studies showing a pattern of a higher rate of reproductive disorders in Danish men. The researchers also found that this rate in Denmark was significantly greater than what was reported 40 years ago. Although genetic factors could play a part in the difference between the two countries, the researchers believe the most likely explanation is environmental factors, such as lifestyle or exposure to agents impairing key reproductive processes.

Until this can be proven and the environmental factors determined, it is important that information on undescended testes is made available to parents. As undescended testes are linked to low sperm quality and testicular cancer later in life, patients and their families must know about these risks, especially since early diagnosis of testicular cancer usually results in cure. Providing educational materials to the parents of these children is essential and should become part of the routine management of boys with undescended testes.

Reference:

Boisen KA, Kaleva M, Main KM, Virtanen HE, Haavisto AM, Schmidt IM, Chellakooty M, Damgaard IN, Mau C, Reunanen M, Skakkebaek NE, Toppari J. *Difference in prevalence of congenital cryptorchidism in infants between two Nordic countries.* Lancet. 2004 April 17;363(9417):1264-9

Cycling Australia puts reproductive health on track



Photo: Rennie Banham

Athletes in all sports are usually very conscious of their health as they have to be in peak physical condition to be able to compete.

They may, however, not be aware of how their competitive training may impact on their reproductive health.

Competitive cyclist Lance Armstrong and his battle with testicular cancer raised the awareness of this male reproductive health disorder internationally. Andrology Australia is now working with Cycling Australia to educate their coaches and 20,000 members about the reproductive health disorders they may experience, with some disorders arising due to extended periods of cycling.

National Coaching Director of Cycling Australia, Ron Bonham, said that he is happy to be able to provide this health information to their members and coaches.

"There are competitive cyclists who have been affected by reproductive health disorders, so it is great to be able to deliver relevant health information to all the male cyclists and raise their awareness of these disorders," said Ron.

"By ensuring male cyclists know of the problems they may face, they will be equipped with the knowledge to identify when a health problem arises and where to seek appropriate information and advice".

Cycling Australia is providing health information from Andrology Australia to their male cyclists through an e-newsletter, a link from the Cycling Australia website to the Andrology Australia website is being established, and there have also been discussions about providing education seminars on men's reproductive health for national coaches in 2005.

Testicular cancer, erectile dysfunction, testosterone (androgen) deficiency, and the use and misuse of androgens are the main disorders that will be discussed.

Although there is no definite link between testicular cancer and cycling, some cyclists experience some genital numbness¹ after riding and the symptoms of testicular cancer may go unnoticed.

Cyclists are often known to experience episodes of erectile dysfunction after long-distance cycling events². It is important for cyclists to know that erectile dysfunction can also be a symptom of another life-threatening disease, such as diabetes, and to see a doctor if erectile dysfunction is experienced over an extended period of time.

Testosterone deficiency (androgen deficiency) can be caused by a genetic (Klinefelter's Syndrome) or medical problem, damage to the testes, or simply be a part of the ageing process. It can also affect some competitive athletes due to their extreme exercise and lean body mass.

Those cyclists that clinically need testosterone (androgens) to keep their hormones at a normal level are able to engage in competition, but androgenic-anabolic steroids are sometimes misused and abused by athletes to improve sporting ability by enhancing muscle size and strength. Athletes using androgens outside the rules of their particular governing body can face disqualification.

With an average of one million bikes being bought every year in Australia and cycling being promoted as the exercise to encourage healthy living, men who ride bikes non-competitively should also be aware of these disorders as part of their healthier lifestyle.

Andrology Australia is looking forward to furthering this relationship with Cycling Australia, and also hopes to work with other sporting bodies around Australia in the future.

References

1. Sommer F, König D, Graft C, Schwarzer U, Bertram C, Klotz T, Engelmann U. *Impotence and genital numbness in cyclists*. International Journal of Sports Medicine 2001 Aug;22(6):410-3
2. Dettori JR, Koepsell TD, Cummings P, Croman JM. *Erectile dysfunction after a long-distance cycling event: associations with bicycle characteristics*. Journal of Urology 2004 Aug;172(2):637-41

Focus on UNDESCENDED TESTES

What are undescended testes?

Testes (testis, singular), commonly known as the testicles, are male sex glands that are responsible for producing sperm and sex hormones. Both testes are usually located inside the scrotum, next to the penis. In most boys, the testes initially grow in the abdomen and then move down into the scrotum before or just after birth.

Undescended testes (or cryptorchidism) is a condition at birth when one or both of the testes are not lowered into the scrotum, but stay in the abdomen or only move part way down into the scrotum. In many cases, the testis will descend on its own before the child is three months old. If a testis is not in the scrotum by six months of age, it is unlikely that it will descend by itself and will need to be treated.

What causes undescended testes?

Undescended testes can be unilateral (one) or bilateral (both), and are often found in babies with hormonal disorders. Physical abnormalities at birth and genetic disorders such as Klinefelter's Syndrome can also lead to undescended testes. It has been found that babies born with spina bifida and Down Syndrome are more likely to have this condition as well.

For many babies born with undescended testes, the cause is unknown.

How common is it?

About five per cent of all boys are born with undescended testes. This number drops to around two to three per cent by six months of age because the testes often descend into the scrotum on their own during this time. Undescended testes are more common in premature male babies because the testes do not descend from the abdomen into the scrotum until the eighth month of pregnancy.

In some countries, the prevalence of cryptorchidism is thought to be increasing for reasons unknown¹.

How are undescended testes diagnosed?

Undescended testes are diagnosed through a physical examination by a qualified medical practitioner. In some cases, a missing testis can be felt in the lower abdomen. Avoiding cold temperatures during the examination is preferable, as retraction of the testes may happen.

What are retractile testes?

Undescended testes should not be confused with retractile testes. Retractable testes are when, on occasion, the muscle attached to the testis (the cremasteric muscle) pulls the testis up into the groin so that it cannot be felt or seen. If the testis can be moved back down to the scrotum, then no further treatment is needed. Retractable testes can stay higher in the scrotum over the years, but this usually corrects itself by puberty.

What are acquired undescended testes?

When a boy is born with testes located in the scrotum, they can occasionally move back out of the scrotum and into the groin. This is a condition called acquired undescended testes, or acquired cryptorchidism, which can happen between one and 10 years of age. The cause is thought to be that the spermatic cords attaching each testis to the body, fail to grow at the same pace as the rest of the body. The short spermatic cords slowly pull the testes out of the scrotum and inside the groin.

What is an absent testicle?

In about five per cent of cases, there is a complete absence of the testis. It is thought with failure of testicular descent, that an interrupted blood flow may cause the developing testis to die in utero. Absent (or vanished) testis can also be associated with other birth defects of the urinary system, such as abnormal blood vessel networks to the tubes that carry sperm (vas deferens).

Why should undescended testes be corrected?

Undescended testes are linked to a range of health problems and conditions later in life, which is why it is important to place an undescended testis back in the scrotum.

Fertility

The temperature in the scrotum is lower than in the abdomen, and sperm-producing tubes in the testes function better at a cooler temperature. If a testis is exposed to higher temperatures than when it is in the scrotum, it can harm the production of sperm. Bringing the testis down into the scrotum between six to 12 months of age can improve semen quality and fertility later in life. Men born with bilateral undescended testes usually have very poor sperm quality, even if corrected by surgery.

Cancer

The risk of developing testicular cancer in men born with undescended testis is up to ten times greater than the general male population. This risk of testicular cancer may remain even after early placement of the testis in the scrotum. The normally descended testis opposite the undescended one is also at increased risk for cancer.

Trauma

When a testis is trapped in an abnormal position, it is at higher risk of injury or torsion (twisting and cutting of its blood supply). A testis in the scrotum has more mobility and is less likely to be injured in ordinary activity.

Hernia

A hernia sac, which is a lump that appears when tissue breaks through a weakened area of the abdominal wall, is almost always associated with an undescended testis. If an operation is conducted to bring the testis into the scrotum, the hernia is identified and fixed at this time.

Focus on UNDESCENDED TESTES

Poor self image

As boys age, body image becomes more important, especially during teenage years. Abnormal testes can have a negative impact on the boy's confidence and self-esteem. Placing the testis in the scrotum makes the scrotum look normal.

How are undescended testes treated?

Undescended testes can be treated in two ways:

- An operation (orchidopexy)
- Hormone injections

The most common and preferred treatment is an operation called an orchidopexy. Surgery involves locating the testis in the abdomen or higher in the scrotum, then bringing it down into the scrotum.

In some cases, hormone injections can help the testis move down into the scrotum. The hormone injected is called human chorionic gonadotrophin (hCG), which helps the testes make male hormones. A greater amount of male hormone can move the testis down, although if it does not come down then an operation is needed. Hormone injections work best if the testis is already very close to the scrotum.

When should surgery (orchidopexy) be performed?

As testes that are not descended at birth often come down in the first six months, it is best to wait until this age before deciding on surgery. If at six months of age the testis cannot be felt or is very high, it is unlikely that it will come down without treatment.

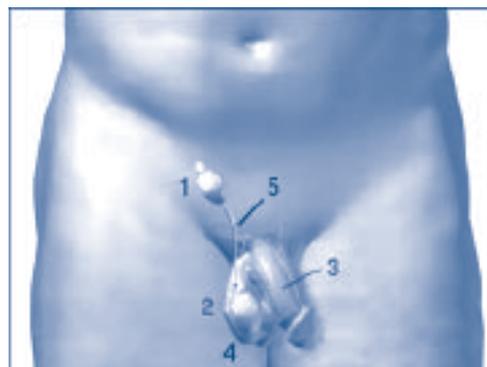
Occasionally the testes are too severely damaged to be brought down. They may have twisted in utero and lost their blood supply, resulting in irreversible damage and formation of scar tissue and unable to function. The testes are removed if this happens.

What happens during surgery?

The child is put under a general anaesthetic. A cut is made in the groin to access the testis inside the passage where the testes descend into the scrotum (inguinal canal). The testis is then taken out of the inguinal canal and the spermatic cord that links the testis to the body is 'unkinked' and gently stretched to its full length. Obstructive tissue may have to be cut away to achieve this. A cut is then made in the scrotum and the testis moved down into the scrotum. Stitches are then put in place once the testis is in position to make sure the testis does not pull back out. All cuts are then closed and in most cases, the child will go home on the same day the surgery is performed.

Are there any complications with surgery?

There are usually few complications with this surgery. Wound infection or bleeding may happen, as with any operation.



1. undescended testis
2. normal testis position
3. penis
4. scrotum
5. inguinal canal

It is possible to injure the testicular blood vessels or the vas deferens as these structures are very delicate. Rarely, some testes do not reach the scrotum after the first surgery and need a second surgery about a year later, to bring them into their normal position. After surgery, regular checks of the testes are needed.

What if an adult finds he has an undescended testis?

If an adult discovers that he has an undescended testis, moving the testis into the scrotum at this point will not improve fertility levels. In adult men, an undescended testis is usually taken out. Often, if over the age of 40, nothing is done.

Can undescended testes be prevented?

Doctors do not know how undescended testes can be prevented.

Why must boys be told if they had undescended testes at birth?

Even though undescended testes are usually corrected in the boy's first year of life, he is at a higher risk of experiencing reproductive health problems later in life. Problems with fertility and an increased risk of getting testicular cancer are important health problems to be aware of as they grow older. Regular testicular self examination (TSE) is recommended for men born with undescended testes, especially to check for lumps or swellings that could be a sign of testicular cancer.

Reference:

N.E.Skakkebæk, E.Rajpert-De Meyts and K.M.Main. *Testicular dysgenesis syndrome: an increasingly common developmental disorder with environmental aspects*. Human Reproduction July 2001. 5:972-978.

GP education program on erectile dysfunction



Photo by Janusz Molinski

Men often recognise that GPs are the appropriate professionals to speak to about erectile dysfunction; however, many men with erectile dysfunction hesitate to discuss sexual functioning with their local doctor. GPs can also lack the confidence to initiate discussions of sexual health and function during consultations, even though detection of this common condition can lead to successful treatment in many cases.

A clinical audit for erectile dysfunction is being developed to increase professional awareness and improve management of erectile dysfunction in general practice. The clinical audit will provide an opportunity to improve GP knowledge about prevalence and risk factors for erectile dysfunction, develop interpersonal skills to be able to initiate discussion, and develop evidence-based guidelines for assessment and treatment.

The result of the audit will be quality and unbiased education programs tailored to the management of erectile dysfunction. Already underway, the audit is to be completed by March 2006 and education programs will be available to the Australian GP community soon after.

The project is being coordinated by the Department of General Practice at Monash University and Andrology Australia, with financial support from Eli Lilly Australia Pty Ltd.



Preliminary Notice

10th Biennial Meeting of the Asia Pacific Society for Sexual and Impotence Research
5-8 October 2005 – Cairns Convention Centre, North Queensland

'Sexual Dysfunction: Old Problems, New Solutions'

Call for Abstracts:
submission date 15 April 2005

Meeting includes:
Symposium on Androgens and the Older Male Saturday 8 October 2005

Supported by Andrology Australia

For more information

www.promaco.com.au/conference/2005/apssir

Internet Update

Andrology Australia is redesigning the general website (www.andrologyaustralia.org) to make information more easily accessible and the site more interactive and up-to-date.

The new website will aim to engage users more effectively than currently, and make it easier for users to find information. The content will be regularly updated to make sure users have access to the latest information.

The professional and general websites will be combined which will enable information to be found at one site and avoid repetition. Information on different topics and new sections will also be easily added on the new site. The 'What Every Man Needs to Know' web address will continue to lead to the website.

Results from a survey conducted last year on the website have led to this redesign taking place.

Although users surveyed found the site provides quality and informative material (on a scale of 1=not very useful to 6 being very useful, a score of 4.8 was achieved), improving other aspects such as navigation will enable the site to be more user-friendly. Changes made hope to address more specific areas identified in the survey in relation to other specific topics of interest, such as details of relevant support groups and men's health events in Australia.

Active since 2001, the general website currently receives an average of 480,000 hits per month. In 2004, there were almost 8500 downloads of The Healthy Male newsletter, over 1700 downloads of the vasectomy fact sheet since July, more than five million hits for the year and more than 200,000 visits to the site.

The new site should be completed by September 2005 and its usability and content will ensure it is seen as the primary resource for information on men's reproductive health in Australia.



Professor John Hutson

Professor John Hutson is an international expert in paediatric sexual development with an extensive background in research, teaching and clinical practice.

After spending time as a surgical registrar at the Royal Hospital for Sick Children in Glasgow, John returned to Melbourne and developed a special expertise in paediatric urology and the surgical management of intersex conditions.

He currently holds positions as a Professor of Paediatric Surgery at University of Melbourne, Director of the Department of General Surgery at Royal Children’s Hospital and Associate Director of Clinical Research at Murdoch Children’s Research Institute.

Since 1985, John has been responsible for undergraduate teaching of paediatric surgery at the University of Melbourne and supervised surgical teaching and postgraduate students over a number of years. John has written and edited extensively for postgraduate and undergraduate publications, with a number of scientific publications also.

Not only does John contribute to the community professionally, but he also contributes to his local community as a group leader and committee member of 1st Malvern Scout Group.

New Institute

Monash University and the Southern Health Network are partnering a new research initiative, the Monash Institute of Medical Research (MIMR). The Monash Institute of Reproduction and Development together with the Centre for Women’s Health Research and the Centre for Inflammatory Diseases will become the Monash Institute of Medical Research and will progressively build new research linkages with research programs in Southern Health.

MIMR will provide seamless links between basic and clinical research and will house and administer Andrology Australia.

Calendars

If you subscribe to the Healthy Male, you should by now have received your 2005 Andrology Australia desk top calendar. Remember to tell family and friends to subscribe to this free quarterly newsletter to ensure they receive their men’s health update and this year’s calendar before they all run out.

Annual report

The Andrology Australia 2004 annual report is now available. This years report focuses on the research Andrology Australia has initiated that underpins community and professional education programs. The 2004 summary ‘At a Glance’ is also available.

For your copy of the annual report or summary, please call 1300 303 878 or email info@andrologyaustralia.org. The report is also available to download from the website at www.andrologyaustralia.org



Newsletter of Andrology Australia
Australian Centre of Excellence in Male Reproductive Health

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