Prof Andrew Holland

Undescended Testis (UDT)

Still a Common Paediatric Concern: What You Need to Know

Undescended Testis (UDT) remains extremely common, with an estimated incidence of 0.5 – 9% of newborn males. Many of these testes will spontaneously descend in the first three months of life, but if this has not occurred after this age all boys should be referred to a Paediatric Surgeon for assessment. The Ascending Testis Syndrome (ATS) or acquired UDT, may occur in boys when the testes have been observed in the scrotum at birth but then appear to ascend over time.

Pathophysiology and symptoms

The UDT may be located somewhere along the normal line of descent, between the posterior abdominal wall of the abdominal cavity and the scrotum, or in an ectopic location, such as the upper thigh or perineum. In contrast, in the ATS the testis will always be located at some point along the normal line of descent.

The cornerstone to diagnosis of UDT remains inability to visualise and palpate the testis in the scrotum, with scrotal asymmetry the cardinal feature . This may be observed by the parents or noted during routine clinical examination and healthcare checks. Pain generally only occurs because of torsion and is a surgical emergency.

Any testis in an abnormal position has a greater risk of torsion, reduced fertility and increased risk of subsequent malignancy related to its abnormal fixation and elevated temperature compared to a normally descended testis located in the scrotum, which typically will be 2°C cooler than core body temperature. There appears increasing evidence an abnormally located testis should be fixed in the scrotum as soon as possible after 3 months of corrected age or after the diagnosis has been made. For every 6 months delay after 18 months of age, the risk of malignancy increases by 6% and there is a 1% reduction in fertility.

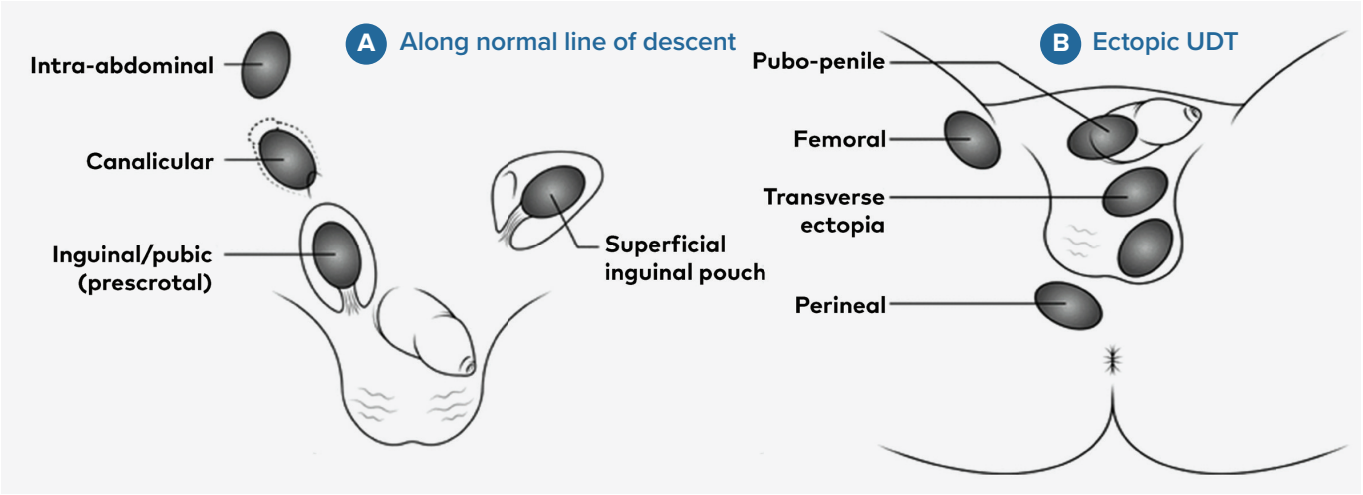
Assessment

Approximately 80% of abnormally located testis can be palpated, most commonly in the inguinal region. An attempt should be made to gently coax the testis into the scrotum and, if this can be achieved, assess the degree of tension in the spermatic cord and whether the testis remains descended once reduced. Care should be taken to examine the boy in a relaxed, warm environment to assist differentiated an UDT from a retractile one. Unfortunately this remains a subjective assessment: parental observations, scrotal hypoplasia, variation in size and texture of the testes and spermatic cord tension all factor into decision making. In borderline cases a clinical review on a second occasion 6 – 12 weeks later may help clarify the diagnosis.

Ultrasound (US) has often been used to assess UDT but is only rarely of value, as even a normally descended testis may be observed in the inguinal region during sonographic examination due to a combination of the cremasteric reflex, a cool room and US gel, patient anxiety and direct pressure from the US probe. US will usually not be able to locate an intra-abdominal testis but can be helpful in determining the size of the testes and any underlying architectural abnormality.

Continued overleaf...

Position of undescended testes



Surgical options

Orchidopexy for a palpable testis will generally be achieved with an inguinal approach, associated with a second scrotal incision to secure the testis in a sub-Dartos pouch within the scrotum. Some surgeons favour a single, parascrotal incision for a low UDT. For the impalpable UDT a minimally invasive, laparoscopic approach allows identification of the position and size of the testis. In approximately 75% of cases a laparoscopically assisted one-stage orchidopexy can be performed, with incisions located at the umbilicus, both lower quadrants and scrotum, with the remainder requiring either a two-stage procedure or excision of a non-functional, atrophic testis.

Complications and outcomes of surgery

In general most boys will have good outcomes from their surgery. Long-term data on current earlier surgery for UDT remains limited due to the length of time required between surgery and ability to determine its impact on paternity and malignancy. Data from surgery performed in the 1950s – 1970s identified paternity rates of 62% (bilateral) to 90% (unilateral) UDT compared to 94% for age-matched controls. For all boys, use of a box or cup when playing cricket should be recommended. When the boy reaches puberty, education concerning the role of Testicular Self Examination (TSE) in detection of any future malignancy should be explained.

Professor Andrew Holland

BSC (HONS), MB BS, PHD (SYD), FRCS (ENG), FRACS (PAED), FACS

Paediatric Surgeon

Westmead Private Hospital
Specialist Medical Centre
Sydney Paediatric Surgery
Level 3, Suite 305
151-155 Hawkesbury Road
Westmead NSW 2145

P: **1300 362 278**
F: **1300 315 668**
W: sydneypaediatricsurgery.com.au

Professor Holland is a Paediatric Surgeon who has been working in Sydney for over 10 years. Although a general Paediatric Surgeon, his interests include neonatal surgery, hypospadias and burns.

Originally from the UK, Professor Holland qualified as a doctor at St. Bartholomew's Hospital Medical School and the University of London. After obtaining his general fellowship from the Royal College of Surgeons of England he moved to Australia, where he commenced further training as a Paediatric Surgeon at Princess Margaret Hospital for Children in Perth, the Women's and Children's Hospital in Adelaide and The Children's Hospital at Westmead in Sydney.

Professor Holland remains passionate about education, teaching and research in paediatric surgery, with over 200 publications in the scientific literature.

Interests:
- General
- Paediatric Surgery
- Hypospadias

MR0053751 WPH Website Article - Andrew Holland - Undescended Testis (UDT) 0625