

Guideline for the Management of Acute Scrotal Pain in Childhood

Reference no.: CH CLIN S 34/April 22/v001.1

1. Objective of Guideline

To provide guidance for optimal management of boys with acute scrotal pain.

2. Main body of Guidelines

Rationale for the Recommendation

The guidelines were formulated following the audit of the management of acute scrotal pain within the Paediatric Surgical Unit of the Derby Children's Hospital. The audit reviewed such cases which underwent review between April 2016 and September 2016 and highlighted significant deviation from the 2016 Commissioning Guidance on the Management of Paediatric Torsion issued by the Royal College of Surgeons (1).

Broad recommendations

All boys under the age of 16 years with painful scrotum who present to the Children's Accident and Emergency Department (A&E) may be triaged by the A & E and the on call surgical SHO / registrar should be informed immediately once the diagnosis is suspected. The registrar should review the child within 30 minutes of arrival A & E. If the on-call surgical registrar is unable to see the child within 30 minutes and no other surgical registrar is able to assess the child, the case should immediately be discussed with the on-call Consultant to ensure a management plan is reached within 30 minutes of arrival of the child to the A & E. Urgent scrotal exploration should take place within one hour of a provisional diagnosis of acute testicular torsion being made as this condition is classified as CEPOD Group 1 (urgent condition requiring surgery within 1 hour).

Boys under the age of 5 years can safely be managed at Derby Childrens Hospital, however should be reviewed by the Consultant on Call and a decision about location of exploration made based on a case by case basis depending on local surgical expertise and clinical presentation. If necessary cases may need discussion with local tertiary paediatric centre.

Aetiology

Acute scrotal pain in children could arise from a variety of causes, some of which may coexist. These causes include trauma, twisting or torsion of the testis, torsion of an appendage of the testis, idiopathic scrotal oedema, incarcerated inguinal hernia, infection (epididymitis, orchitis and epididymorchitis) and Henoch-Schonlein purpura (2).

Clinical Presentation

Symptoms – Pain is the commonest presenting symptom, and, it may start suddenly or be of gradual onset. The child may also complain of difficulty in passing urine, lower abdominal pain, nausea and vomiting.

Signs – The child may be in obvious discomfort, have an unusual gait or be reluctant to move. The scrotal region is usually very tender and may be red and swollen. There may also be a high riding testicle, absence of cremasteric reflex, a focal blue-dot at the upper pole of the testis, diffuse blue discoloration of the hemiscrotum or a reactive hydrocele. A high temperature may also be observed (2).

Investigations

A urine sample should be obtained as soon as possible and a dipstix test performed. The urine sample may be sent for microbiological tests at the discretion of the reviewing surgeon. At surgery, a microbiology swab may be taken at the discretion of the operating surgeon if infection is thought to be present.

Radioisotope scans and Doppler ultrasonography are not part of the initial management of acute scrotal pain in many centres (2, 4). This is because it may contribute to delay in treatment with unacceptable consequences. Moreover, in obese boys and when the testicular volume is about 2 ml, the diagnostic accuracy of these tests is low resulting in limited clinical benefit.

Management

Every boy with acute scrotal pain should be reviewed urgently by a surgical registrar or consultant. Quick and directed history taking is essential. A history of previous transient scrotal pain is significant. Testicular loss from infarction can occur after as little as 2 hours of onset of symptoms (2). A delay in treatment can result in orchiectomy, and has been associated with reduced fertility (3). Thus surgical intervention should ideally take within one hour and acute scrotal pain should be treated as torsion of the testis until proven otherwise.

All boys with scrotal pain should be assumed to be testicular torsion until proven otherwise. Exploration should be performed unless a definitive alternate diagnosis can be proven.

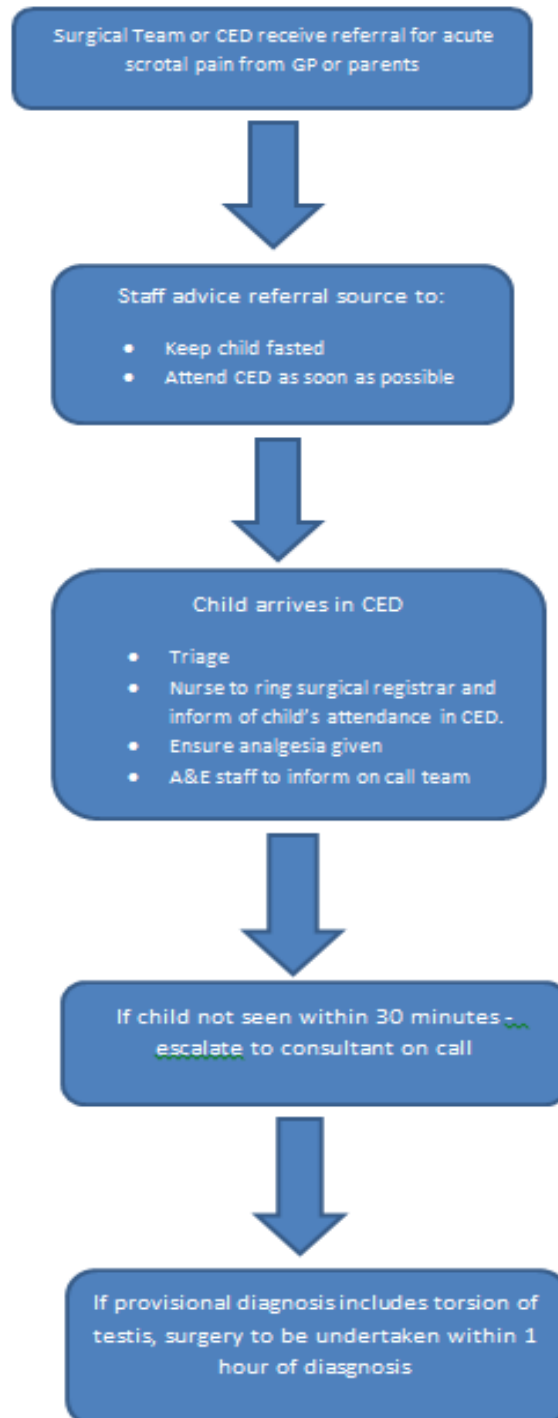
Follow up

Testicular atrophy may result following torsion of the testis if infarction has occurred during the episode. This may be obvious at the time of surgery when the testis is removed and the contralateral testis is fixed. However, testicular infarction may not be evident at surgery and would manifest later as a reduction in the volume of that testicle usually associated with a change in testicular texture as fibrosis sets in. Testicular atrophy is usually clinically evident by 4 weeks (5, 6). Follow up assessment should therefore take place no sooner than 6 weeks after surgery. This allows inflammatory changes to settle, the wound to heal and any atrophic changes to become evident.

Special Situations

- a. Where the duration of symptoms is 48 hours or more, the emergency surgery need not follow the 1 hour rule but exploration is still indicated.
- b. When on examination, the patient has become symptom free and there are no signs of an acute episode of torsion of testis. If a diagnosis of a spontaneous detortion / intermittent detortion is made, the testis should be explored as soon as possible but need not be within 1 hour.
- c. Neonatal torsion. This is an antenatal event and the testis is usually non-salvagable. Surgical exploration is indicated for fixation of the contralateral side. The indication/ timing of exploration to be decided by the consultant in charge.

Guideline



3. References (including any links to NICE Guidance etc.)

References/ source documents

1. Management of Paediatric Torsion – Royal College of Surgeons. Commissioning Guidance issued by NHS East Midlands Clinical Networks. 2016
2. Pediatric Surgery. O'Neill J A, Rowe MI, Grosfeld JL, Fonkalsrud EW, Coran AG. Fifth edition 1998; 1099-1101. Moby Publishers.
3. Testicular Torsion and Risk Factors for Orchiectomy. Mansbach JM, Forbes P, Peters C. Arch Pediatr Adolesc Med Dec. 2005; 159: 1167-1171
4. The incidence and investigation of acute scrotal problems in children. McAndrew HF, Pemberton R, Kikiros CS, Gollow I. Pediatr Surg Int 2002; 18: 435-437
5. Testicular tissue bleeding as an indicator of gonadal salvageability in testicular torsion surgery. Arda IS, Ozyaylali I. BJU International 2001;87:89-92
6. Testicular torsion: Direction, degree, Duration and Disinformation Sessions AE, Rabinowitz R, Hulbert WC, Goldstein MM, Mevorach RA. The Journal of Urology Feb 2003; 169: 663-665

4. Documentation Controls

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