CORRESPONDENCE

The Acute Scrotum in Childhood and Adolescence

by Dr. med. Patrick Günther, Dr. med. Iris Rübgen in volume 25/2012

Pain May Present in Variable Ways

The statement that the acute scrotum is always characterized by scrotal pain applies only to a degree. Unfortunately the authors did not mention that scrotal pain by no means dominates the initial consultation for testicular torsion since many patients report pain in the inguinal region/lower abdomen and not the scrotum. If the genitals are not examined lower abdominal pain may be misinterpreted as appendicitis or gastroenteritis, and watchful waiting therefore be practiced, with the result that the testicle will be lost.

In 13 of 37 cases of unrecognized testicular torsion, the genitals were not examined. Torsion leads to scrotal edema, which was misinterpreted as epididymitis in 12 of the 37 cases. This results in the risk of misdiagnosis.

The mention of color Doppler sonography to prevent such misdiagnosis is helpful only to a degree. In the emergency setting, the initial contact with a doctor may be with a doctor in further training who does not have the experience to perform color Doppler sonography. Many hospitals do not have a urology department and initial treatment is provided by doctors from other specialties, who do not know how to perform color Doppler sonography of the scrotum. This is also the case for emergency outpatients, who are seen by doctors from all specialties. Only few of the 37 patients were seen by a urologist or pediatric surgeon on initial presentation.

In cases of undefined pain in the inguinal region/lower abdomen, testicular torsion should be considered and the genitals should be investigated. Older age does not exclude testicular torsion; three of the 37 patients were older than 40. Prior orchidopexy does not exclude torsion and should not lead to a false sense of security.

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Dr. med. Christoph von Zastrow
Hannover
christoph.von_zastrow@web.de

Testicular Torsion Masked by Painful Abdomen

We would like to add a few comments to the excellent review article by Günther and Rübgen. In our opinion it seems worth mentioning that testicular torsion may be masked by a painful abdomen. We review 10 patients with testicular torsion who presented with abdominal pain as their leading symptom. For this reason we recommend mandatory genital examination in the clinical assessment of boys with abdominal pain. Particular attention should go to boys with reduced sensitivity of the lower half of the body—for example, in patients with meningomyelocele.

When operating a patient with an incarcerated inguinal hernia we advise to visualize the ipsilateral testis since an incarceration can substantially compromise testis perfusion.

Testicular trauma is not only an important differential diagnosis in acute scrotum but in itself presents a risk factor for testicular torsion (e21 in the article).

The literature encompasses some 50 cases of ipsilateral testicular torsion after orchidopexy (1). Thus we suggest the modified technique for testicular fixation reported by Gesino and Bachmann de Santos (2).

A full blood count, C-reactive protein concentration, and the analysis of urine sediment are listed as components of the diagnostic approach. With the exception of leukemia, which hardly ever needs to be considered, none of the differential diagnoses has a definitive laboratory constellation. Studies investigating predictive variables in acute pediatric scrotum mostly do not even consider laboratory variables from the outset (for example, e21 and 3). Furthermore, ascertaining the above-mentioned parameters may delay the definitive diagnosis. The decisive issue is timely presentation in institutions that can perform the required surgical measures immediately. For this reason we think that the diagnostic evaluation listed above can be dispensed when assessing a boy for testicular torsion.

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Dr. med. Mariana Santos

Dr. med. Michael Kohl

Funktionsbereich Kinderchirurgie der Klinik für Allgemein-, Viszeral- und Kinderchirurgie, Uniklinik Düsseldorf
michael.kohl@med.uni-duesseldorf.de

In Reply:

The acute scrotum is a medical emergency, and the objective is to prevent possible damage to the testicular parenchyma. Doppler ultrasonography has the central role in this setting. In order to correctly assess perfusion of a testicle in children, experience in this setting is indispensable, in addition to the criteria listed in our article. If the initial examiner does not have the relevant expertise the patient should immediately be referred to where the examination and possibly required surgical intervention can be performed adequately. No relevant delay is acceptable. The relevant sentence in our conclusion—"Whenever doubt exists, it is safer to explore"—therefore remains the guiding principle in the treatment of the acute scrotum (1).

It is indisputable that the general physical condition should be assessed in children with abdominal or inguinal pain. This includes the scrotum in boys, since the pain caused by the acute scrotum can radiate into the abdomen. Because the topic is enormously wide-ranging we did not mention the differential diagnoses of abdominal pain in children in our review of the acute scrotum.

As mentioned in the letter by Santos und Kohl and in our review article, laboratory chemistry does not have

any role in the differential diagnostic evaluation (2). This should be considered only in settings where leukemia is sufficiently strongly suspected. We thank our correspondents for pointing out that ipsilateral torsion is possible even after testicular fixation (3). Several surgical methods for fixating the testes after torsion have been presented in the literature.

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Dr. med. Patrick Günther

Sektion Kinderchirurgie, Klinik für Allgemein-, Viszeral- und Transplantations-chirurgie, Universitätsklinikum Heidelberg
patrick.guenther@med.uni-heidelberg.de

Conflict of interest statement

The authors of all contributions declare that no conflict of interest exists.