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We at Pediatric Surgical Associates have greatly appreciated our collegial relationship with our referring pediatricians and family practitioners over the past many decades, and we plan to continue to serve you and the children of Tarrant and surrounding counties for decades to come. As a friendly assistance to your assessment of surgical conditions in the children you treat, we have initiated a monthly informational newsletter. The purpose of this newsletter is to give you a glimpse into our approach to various surgical conditions so you can better decide who should be referred, who does not need to be referred, and what is appropriate regarding the timing of the referral. Each issue of this newsletter will contain a brief article explaining our approach to a particular common surgical condition in children. Each one-page newsletter is designed to fit into a loose-leaf binder, and we sincerely hope that you will save each copy and keep the collection in a handy location for future reference. Our hope is, of course, that the ultimate result will be even more satisfied families and healthier children. ***PLEASE NOTE WE HAVE ADDED A SOUTHWEST OFFICE.***

ACUTE SCROTAL PAIN

Several surgical conditions in children demand the cessation of all other activities until the condition has been thoroughly investigated. The sudden onset of scrotal pain is one of those. Unless the youngster is already in a physician's office, it is best not to take the extra time having him come in for an examination, but rather to advise him to head immediately to the Emergency Department where both clinical and ultrasonographic examinations are readily available.

Several entities may cause an acute onset of scrotal pain, but the most serious possibility on the list of differential diagnoses always dictates the urgency. In this case, it is testicular torsion, a condition requiring immediate intervention if the testicle is to be saved. Other conditions causing acute scrotal pain include epidiymitis and torsion of the appendix testes, neither of which is a surgical emergency.

Testicular torsion. Contrary to what one may suppose, the testicle is generally not 'free' to move around within the hemiscrotum. As the testicle descends along the retroperitoneum during the last trimester of gestation, drawn by the gubernaculum toward the scrotum, a diverticulum of peritoneum adheres to it as it passes through the internal ring and into the distal scrotum. Ultimately, the testicle occupies a space between this empty sac and the wall of the hemiscrotum. The testicle is therefore normally covered on one surface by the sac, but fixated along the other side to the hemiscrotum which limits its ability to move in any plane. If the testicle enters the scrotum abnormally surrounded entirely by the sac rather than partly adherent to the hemiscrotum, its only attachment to the body will be the vas deferens and the spermatic vessels at the upper pole. This is known as the 'bell clapper deformity', alluding to the testicle being suspended at one single point. The testicle is therefore free to rotate on its long axis, like an egg spinning on a string. The factors that cause this to happen are not clear, but when torsion does occur, the low pressure venous outflow from the testicle is initially occluded causing vascular engorgement with swelling of the testicular parenchyma. Since the tunica vaginalis which surrounds the testicle is tough and will not stretch, this distention causes a considerable amount of pain as the pressure within the testicle increases. Eventually, occlusion of arterial inflow will occur with ischemia followed by necrosis. Irreversible testicular necrosis occurs between 6 and 12 hours after the onset of pain. Since several

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hours or more will generally have elapsed before the usual teen-age boy has summoned enough courage to inform his parents about his condition, there is generally little time to lose. A call to inform us that the young man is coming to the ER will expedite the ultrasound examination and shorten the time to the OR. Unfortunately, it is not uncommon for 24 or 48 hours or more to have passed before the young man can stand the pain no longer and asks for help. By then, there is generally not much that can be done to salvage the testicle.

The incidence of the 'bell clapper deformity' is estimated at 12% by autopsy reports while the incidence of testicular torsion is only 1 in 4000. There are no external clues suggesting a male is at risk. Testicular torsion generally affects adolescent boys and is unusual before the age of ten. The left testicle is affected more often than is the right.

The diagnosis of testicular torsion should be suspected if the affected side is exquisitely tender, the hemiscrotum is swollen and erythematous, or the normal cremasteric reflex has been lost. The testicle may be 'high-riding' or elevated since the spermatic cord, being twisted, is foreshortened. Generally, the longer the torsion has been in place, the more scrotal swelling and erythema is present.

Sonography will usually show a lack of testicular blood flow. With longstanding ischemia, sonography may identify the loss of normal testicular architecture and necrosis.

When the diagnosis is secure, there should be no delay in surgical exploration of the scrotum. Generally an incision is made in the median raphé between the hemiscrota so that both sides may be examined. The affected side is first examined, the torsion immediately reduced and the testicle wrapped in warm moist gauze. The other testicle is then exposed and inspected. A 'bell clapper' anomaly may be seen on the unaffected side, but whether it is or not, we generally place several sutures between the testicle and scrotum to affix it even more securely; the loss of a single testicle is unfortunate, but loss of both testicles would be disastrous. After the contralateral testicle has been secured, the affected testicle is reexamined. If any part of it has become pink at all indicating possible viability, the testicle is left in place and sutures placed to prevent retorsion. Following surgery, the young man may usually be discharged the same day on oral pain medication.

Epididymitis. Although not a surgically-treated condition, epididymitis must be considered in the differential diagnosis of acute scrotal pain. As with testicular torsion, the affected side is frequently exquisitely tender and the hemiscrotum swollen and erythematous. The testicle may even appear to be high-riding due to the edema. A detail that can be quite helpful is that with epididymitis there is frequently point tenderness in the posterior part of the testicle, in the epididymis, whereas the entire testicle is generally tender when torsion is the cause. The sonogram readily differentiates the two conditions, as epidiymitis is an inflammatory process and blood flow to the affected testicle will be accentuated rather than attenuated.

Analgesics and a ten-day course of antibiotics such as Bactrim will generally be sufficient to treat epidiymitis.

Torsion of the appendix testis. The appendix testis is a pinhead-sized piece of tissue attached to the epididymis usually by a thin stalk. It is a remnant of the Müllerian system and is of no function in the male. Nonetheless, because of the thread-like attachment, the appendix testis can undergo torsion and become infarcted causing exquisite scrotal pain. The pain is generally far out of proportion to the physical findings. Careful inspection of the scrotum will occasionally reveal a small dark spot visible through the thin scrotal skin on the surface of the testicle—the so-called 'blue-dot sign'—indicating the infarcted bit of tissue. This condition is usually managed with analgesics alone as surgical excision is rarely warranted.

The Wisdom of Will Rogers

1. Never slap a man who's chewing tobacco.
2. Never kick a cow chip on a hot day.
3. There are 2 theories to arguing with a woman . . . neither works.
4. Never miss a good chance to shut up.
5. Always drink upstream from the herd.
6. If you find yourself in a hole, stop digging.
7. The quickest way to double your money is to fold it and put it back in your pocket.
8. There are three kinds of men: The ones that learn by reading. The few who learn by observation. The rest of them have to pee on the electric fence and find out for themselves.
9. Good judgment comes from experience, and a lot of that comes from bad judgment.
10. If you're riding ahead of the herd, take a look back every now and then to make sure it's still there.
11. Lettin' the cat outta the bag is a whole lot easier'n puttin' it back.

His thoughts about growing older . . .

First. Eventually you will reach a point when you stop lying about your age and start bragging about it.

Second. The older we get, the fewer things seem worth waiting in line for.

Third. Some people try to turn back their odometers. Not me, I want people to know "why" I look this way. I've traveled a long way and some of the roads weren't paved.

Fourth. When you are dissatisfied and would like to go back to youth, think of Algebra.

Fifth. You know you are getting old when everything either dries up or leaks.

Sixth. I don't know how I got over the hill without getting to the top.

Seventh. One of the many things no one tells you about aging is that it is such a nice change from being young.

Eighth. One must wait until evening to see how splendid the day has been.

Ninth. Being young is beautiful, but being old is comfortable.

Tenth. Long ago when men cursed and beat the ground with sticks, it was called witchcraft. Today it's called golf.

And finally . . . If you don't learn to laugh at trouble, you won't have anything to laugh at when you are older.

Disclaimer: All material is intended for informational purposes only and is not intended, and should not be used, to replace medical advice offered by a qualified physician. We are always available and willing to discuss questionable conditions with you and we invite your request for our assistance.