of this approach by tapering a redundant and patulous rectum has considerable merit when the size of the rectum limits the ability to adequately narrow the anorectal hiatus.[45]

RECTAL TRAUMA

Rectal trauma in pediatric patients generally occurs by one of two mechanisms. The first is by way of penetrating trauma after an accidental impalement injury or, occasionally, a gunshot (Fig. 38-7). The second, and more common, occurs as the result of sexual abuse. Digital or penile penetration of the anorectum or other instrumentation may cause bleeding or bruising. The most common clinical presentation is that of a chronic stellate laceration of the anus with edema (Fig. 38-8).

Perianal condylomata are a common sequelae in cases of sexual abuse. Careful questioning may reveal that a male member of the immediate family has penile condylomata. However, as many as 25% of males who carry human papillomavirus in the urethra have no external evidence of the virus.[46]

The patient with an accidental injury to the anus usually is seen immediately after the incident occurs. An accurate and consistent history of the mechanism of injury is critical. Sexual abuse is suspected when an inconsistent history of the mechanism of injury is elucidated. As with other forms of sexual abuse involving genital penetration in female patients or manipulation in male patients, difficulty is often encountered in obtaining an adequate history from the victim owing to fear, threats of retaliation, or guilt. Unexplained injuries to the rectum must be considered a manifestation of sexual abuse until proven otherwise and must be investigated through the appropriate social service authorities.[47-49]

The child who has an acute traumatic rectal injury is often difficult to examine adequately, owing to the associated discomfort. Penetration of a foreign object by impalement typically requires rectal examination and sigmoidoscopy under general anesthesia. A retrograde urethrogram and/or voiding cystourethography

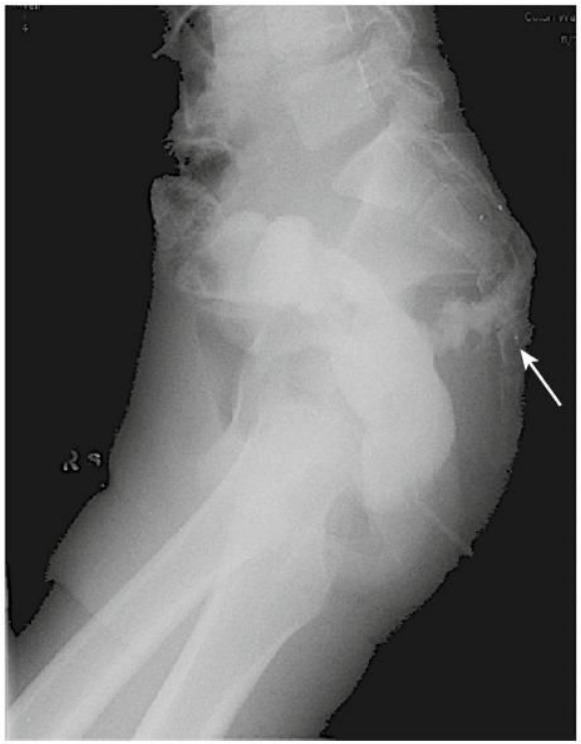

Figure 38-7. This teenager sustained a gunshot wound to the buttocks with a suspected injury to the rectum. He underwent sigmoidoscopy followed by a diverting colostomy. Several days postoperatively, this contrast study was performed and revealed extravasation (*arrow*) from the rectal injury.

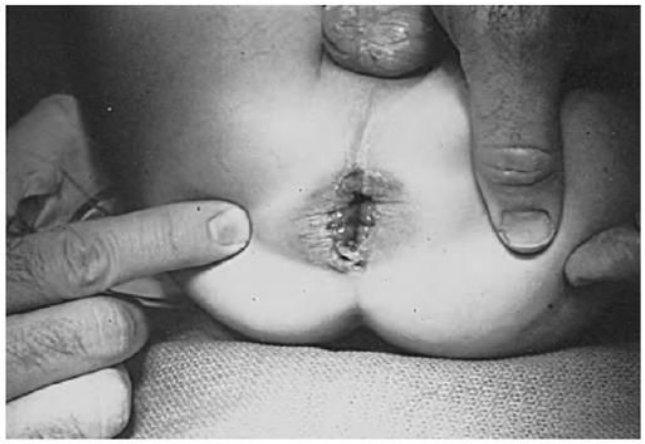

Figure 38-8. This male child was the victim of chronic sexual abuse and shows the typical stellate lacerations of the anal mucosa and skin.

should be obtained when there is suspicion of urethral and/or bladder injury. Although a child who is sexually abused and who has either condylomata or lacerations of a more chronic nature can be examined while awake, we prefer to examine the child using general anesthesia to make a complete assessment of the nature and extent of the injury and to proceed with surgical treatment, when necessary. Photographs are taken to document the extent of the findings for medicolegal purposes.

Treatment of penetrating rectal injuries often requires a diverting colostomy.[50] However, primary repair without fecal diversion can be performed safely in select cases.[51,52] When in doubt, one should always divert the fecal stream to avoid the consequences of perineal sepsis after repair of an anorectal injury. In general, isolated intraperitoneal rectal injuries can be treated with primary repair. Injuries to the proximal two thirds and accessible distal one third of the extraperitoneal rectum can be managed with repair and selective fecal diversion. Inaccessible or severe distal extraperitoneal rectal injuries should be treated by fecal diversion and presacral drainage.[53] Accessible injuries of the distal rectum and anal canal can be repaired with the intent of reapproximating the underlying sphincter muscle mechanism and the overlying mucosa. When the injury is full thickness in nature, fecal diversion should be undertaken. When fecal diversion is necessary, closure of the colostomy is performed once satisfactory healing is demonstrated.

Treatment of sexual abuse lesions involves interruption of the abuse pattern, which may require removal of the child from the home environment. Immediate consultation with child protective services or the local equivalent is mandatory. In the sexual abuse victim who is found to have an acute laceration extending up the rectal wall, it is rarely necessary to perform a diverting colostomy, because these lacerations are not usually full thickness. However, patients with a full-thickness injury should be managed by repair and diverting colostomy. When present, treatment of condylomata depends on the extent of disease. Although small lesions may be responsive to repeated applications of topical agents such as podophyllin or imiquimod, more extensive lesions require surgical removal. Intralesional interferon may be a useful adjunct to surgical methods to decrease recurrence.[54]