

# Combined Technique for Draining Septic Arthritis of the Pediatric Hip

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## Abstract

Recent literature suggests that, in older children, acute cases of septic arthritis may be treated with aspiration and intravenous antibiotics. However, when surgical decompression is required, the technique described in this report has several advantages.

It can be performed with an incision of approximately 1 to 2 inches and a posterior stab wound of <1 cm; it preserves anatomic planes and poses less risk to the circumflex femoral vessels (as with the anterior approach); and it allows fluid to drain when the patient is supine (as with the posterior approach).

**S**epsis occurs in people of various ages and continues to be a potentially severe problem in the pediatric population. Untreated septic arthritis of the hip can be devastating. Sequelae include physis destruction, epiphysis osteonecrosis, osteomyelitis, leg-length discrepancy, and hip dislocation.

Timely diagnosis and treatment are important in maximizing outcomes. A child with hip pain, fever, inability to bear weight, and elevated erythrocyte

sedimentation rate and white blood cell count very likely has septic arthritis of the hip.<sup>1,2</sup> Diagnosis can be confirmed with joint aspiration, and symptom duration may necessitate arthrotomy.<sup>3,4</sup>

The infected hip may be irrigated and débrided several ways. In the past, the posterior approach was used to expose the hip completely. Some surgeons felt that the posterior wound, packed open superficially, allows continued drainage of

## TECHNIQUE

A small, slightly oblique incision is made centered over the femoral neck (Figure 1).

A standard anterior approach to the hip is taken, and a portion of the joint capsule is excised.

Any fluid is sampled for culture, and copious irrigation is used for lavage.

To maximize postoperative decompression, the surgeon passes a

**“ [This] technique...has advantages of both anterior and posterior approaches.”**

the hip with the child supine. The posterior approach, however, poses significant risks, including damage to the epiphyseal arteries leading to avascular necrosis, significant injury to the abductors, and a large capsular defect that may increase risk for hip dislocation. In 1997, Rosenblatt and Bennett<sup>5</sup> found complications in 22 of 33 hips drained through a posterior approach but in 0 of 16 hips drained through an anterior approach.

Most pediatric orthopedists prefer an anterior hip approach,<sup>6</sup> which offers rapid access to the capsule and preserves the musculature around the joint. Risk for injury to the epiphyseal blood supply is also decreased with the anterior approach. After surgery, a suction drain is generally required to prevent accumulation of tissue fluid and inflammatory mediators from the inflamed synovium.

In this report, we present a technique that can be performed quickly and that has advantages of both anterior and posterior approaches.

small clamp bluntly from the anterior arthrotomy through the posterior capsule, and just posterior to the gluteus medius to tent the skin proximal to the greater trochanter.

A stab incision is made over the clamp, and a gravity drain is

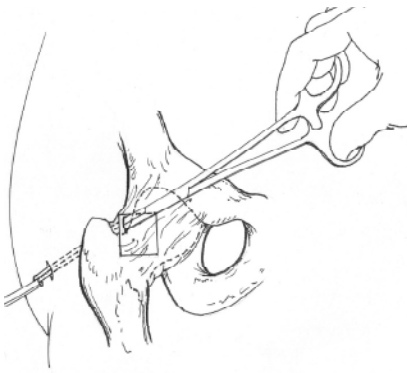


**Figure 1.** Small anterior incision over femoral neck.

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**Figure 2.** Passage of clamp through incision and capsulotomy, through posterior capsule, and stab incision. Drain passed retrograde into capsule.

passed retrograde into the capsule (Figure 2).

The drain is sutured into place posteriorly, and the anterior surgical incision is loosely approximated with polypropylene suture. The drain can be removed in 48 hours.

## DISCUSSION

Recent literature suggests that, in older children, acute cases of septic arthritis may be treated with aspiration and intravenous antibiotics.<sup>2</sup> However, when surgical decompression is required, the technique described in this report has several advantages:

It can be performed with an incision of approximately 1 to 2 inches and a posterior stab wound of <1 cm; it preserves anatomic planes and poses less risk to the circumflex femoral vessels (as with the anterior approach); and it allows fluid to drain when the patient is supine (as with the posterior approach).

## AUTHORS' DISCLOSURE STATEMENT AND ACKNOWLEDGMENTS

The authors report no actual or potential conflicts of interest in relation to this article.

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