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Commentary

The principal claim of Fink *et al*, stated in the title to their paper, is reasonable in itself, but may well prove inadequate to meet the wider variety of pathology which presents itself in larger series of irritable hip patients. The authors presuppose that 'all other serious causes of hip pain, in particular septic arthritis', will be detected by ultrasound by

the finding of a hip effusion which may be diagnostically aspirated. In the first instance the 'accuracy' of sonography in the detection of hip effusions was questioned by McGoldrick *et al*, in the only single blind trial of this technique reported in the literature.¹ Forty six children underwent aspiration; two were found to have an effusion that had not been detected by ultrasound. Even accepting its sensitivity, there is still the premise that 'other serious causes of hip pain' presenting as irritable hip necessarily coexist with an effusion. In our series of 509 consecutive children with painful hips,² 21 provided to have a local septic condition, including nine with osteomyelitis affecting the adjacent pelvis, none of whom are likely to have had an effusion. Furthermore, it is unknown whether femoral metaphyseal osteomyelitis, which may result in true septic arthritis, will always manifest an early 'sympathetic' effusion and if so whether this would yield organisms on aspiration.

Fink *et al* state that 'despite hospital admission' delayed diagnosis of septic arthritis occurs since aspiration is delayed until patients have deteriorated. This proved not to be the case in our series, which included 21 patients with sepsis whereas they encountered only one. All our cases of septic arthritis declared themselves clinically and the diagnostic difficulties only occurred with pelvic osteomyelitis, which was suspected and promptly demonstrated by scintigraphy.

There is widespread agreement in the literature that laboratory and clinical signs in isolation are poor at distinguishing irritable hip from septic conditions. However, the conclusion of our review was that in combination certain of these factors became far more sensitive and yet retained sufficient specificity to avoid unnecessary admissions. Similarly, Del Beccaro *et al*, quoted by Fink *et al*, stated that a sedimentation rate of >20 mm/hour and a fever of 37.5°C identified all but one case of septic arthritis out of 38 cases and should lead to consideration of a diagnostic aspiration.³ Although aspiration may be preceded by a confirmatory ultrasound, as long as this does not lead to undue delay, the technique is not 100% accurate as shown by McGoldrick *et al*¹ and Egund *et al*.⁴

Whether or not there is a prolonged therapeutic effect from aspiration of painful effusions is unproved. The largest series of irritable hip patients treated by aspiration are those of Kallio *et al*⁵ and Erken and Katz,⁶ who aspirated and measured intracapsular pressures in 97 and 85 patients respectively. Both of these studies related the volume of the aspirate to the severity of symptoms and the former to the ultrasound imaged distension of the capsule. The intracapsular pressure was thought to be the key factor and this depended upon volume and hip position. They, along with Wingstrand⁷ and Fink *et al* have all shown that aspiration is beneficial in reducing immediate pain, but no prospective study has comparatively addressed the influence of this, or any other treatment including hospital

admission, on the clinical course of irritable hip and therefore such benefit might be temporary.

Bickerstaff *et al* used ultrasound in a prospective study of 111 children with irritable hip and proposed that it might replace routine radiography in the assessment of such children.⁸ Their patients included none with sepsis and two cases of Perthes' disease who were diagnosed radiographically after persistent symptoms. Their protocol relied upon frequent and skilled ultrasonography, which we feel may be inappropriate in a large proportion of hospitals receiving children with painful hips at any time of the day. Our suggested approach relies upon simple clinical assessment, an ESR measurement, and a radiograph, which ought to be practical in any unit.

If the use of ultrasound guided aspiration is shown to have a lasting therapeutic benefit at negligible risk then it might have a more prominent role in management. In our view it presents logistical problems, may miss a small but clinically important population

with osteomyelitis adjacent to the hip joint, and however skilfully performed, must be an unpleasant procedure for a young and apprehensive child.

G R TAYLOR
N M P CLARKE
*Orthopaedic Directorate,
Southampton General Hospital,
Tremona Road,
Southampton SO9 4XY*

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