THE SNAPPING HIP

TREATMENT BY Z-PLASTY

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We describe a new method of Z-plasty for the snapping hip caused by a tight band in the iliotibial tract. Eight hips in six patients were treated by this method and at follow-up all had a successful result, with relief of snapping.

Many techniques have been described for the treatment of the snapping hip, often with disappointing results (Brückl et al 1984; Zoltan, Clancy and Keene 1986; Féry and Sommelet 1988). The underlying cause of snapping hip is not known but patients with snapping and pain have been found to have a thickening in the posterior part of the iliotibial tract (Mayer 1919). The thickened band lies posterior when the hip is in extension, but during flexion it flicks forward over the greater trochanter causing the 'snap'. Surgical treatment may be necessary in patients with snapping and pain which do not settle on conservative treatment. Since 1980 we have used a technique of Z-plasty which lengthens the tight iliotibial tract and also brings the thickened band anteriorly so that it no longer flicks over the greater trochanter as the hip is flexed.

Fig. 1

The incision and the transposition.

PATIENTS AND METHODS

Six patients (eight hips) were treated by this method during the period 1980 to 1989. There were five females and one male. Their average age at operation was 19 years (range 14 to 32). All six patients complained of snapping and pain which had not settled with conservative management. The average duration of symptoms was two years two months (range two months to five years). Two patients (one with bilateral disease) had already undergone unsuccessful, simple division of the iliotibial band.

The snapping was demonstrated in all the patients pre-operatively by the following method. The patient lies

on the unaffected side with a large pad under the pelvis so that the affected hip is in adduction. Keeping the knee in extension, which tightens the fascia lata, the affected hip is then actively flexed and extended. The band can be felt to flip anteriorly over the greater trochanter as the hip is flexed.

Apart from a positive snapping hip test, examination was otherwise normal with a full range of movement of the hip, and normal radiographs in all cases.

Operative technique.

The patient is placed supine with a sandbag under the affected hip. A longitudinal incision is made from the centre of the greater trochanter extending proximally and the tight iliotibial band is identified. An 8 cm longitudinal incision is made in the fascia lata just anterior to the tight band. The incision should be sufficiently proximal to ensure that, if the suture line fails, the greater trochanter would not protrude through the defect. A second incision is then made at the proximal end of the first incision and directed anteriorly and distally. A third incision is made at the distal end of the first incision, cutting through the tight band posteriorly.

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The flaps are then dissected free from the underlying tissue, transposed and then sutured with interrupted polyglactin-910 sutures (Fig. 1). Closure is performed over a suction drain.

For 10 days postoperatively the patient is kept resting in bed with the hip in abduction. Partial weight-bearing with crutches is then allowed and the patient is instructed to use a wide-based gait keeping the hips abducted. Full weight-bearing is allowed six weeks postoperatively.

RESULTS

The patients were reviewed after an average of three years (range 1 to 8). Snapping was absent and pain relief was excellent in all patients. Two patients (three hips) experienced occasional aching above the greater trochanter associated with exercise. One patient required a second, more extensive Z-plasty, four months after her original operation. It was felt that the reason for this initial failure was that the Z-plasty had been too limited. For the six years since her second operation she has been asymptomatic.

DISCUSSION

Sliding of an iliotibial band over the greater trochanter is the most common cause of a snapping hip. Most patients with this condition have no pain and if they do develop pain associated with the snapping it usually settles with conservative treatment. However, in a minority of patients the pain is persistent, interferes with daily activities and does not respond to conservative treatment. It is this small group of patients who may benefit from surgical treatment. Numerous operative procedures have been described but the success rates are very variable (Table I).

A similar lengthening technique was described in the German literature in 1983 by Dederich, but his method is not widely known. Our technique lengthens the tight band and also transposes the proximal part of the band anterior to the greater trochanter whilst that described by Dederich is a lengthening procedure only. He reviewed six patients following operation and all had relief of snapping.

Table I. Reported results of operations for painful snapping hip

Author	Number of hips	Operation	Success rate* (per cent)
von Asai and Tönnus 1979	15	V-Y Plasty	57
Dederich 1983	6	Z-plasty	100
Brückl et al 1984	27	Diagonal notching	50
	24	Fixation of tract to trochanter	21
Zoltan et al 1986	7	Ellipsoid portion excised	42
Larsen and Johansen 1986	27	Posterior half of band resected	71
Féry and Sommelet 1988	35	Cruciate incision	30
Brignall and Stainsby 1991	8	Z-plasty	88

*success implies relief of both the snapping and the pain

Our results compare favourably with others reported in the literature. Simple division has not been shown to be successful and we would recommend this Z-plasty as an alternative surgical technique for the symptomatic snapping hip.

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