

Surgery for recurrent dislocation of the peroneal tendons

Thirty-five patients with recurrent dislocation of the peroneal tendons were operated a.m. Du Vries. One patient had bilateral dislocations. The dislocation was traumatic in 28 cases and idiopathic in eight. Peroperative complications occurred in eight of the 36 patients due to malposition of a screw, fracture of the malleolus and/or fracture of the bone graft.

The follow-up period was 5 years. In 31 cases the functional results were satisfactory. Five cases were unsatisfactory due to re-dislocation, subluxation or a vague feeling of instability. The inserted screw was the cause of moderate complaints in 15 cases.

The Du Vries' operation is technically difficult; the sliding bone graft must be of adequate size; the position of the screw should be checked radiographically during the operation; and the screw should be removed when the bone graft has healed.

Acute dislocation of the peroneal tendons is reported to be a fairly common complication of skiing traumas (Eckert & Davis 1976), while a chronic condition of recurrent dislocations of these tendons is a rare cause of ankle instability (Zoellner & Clancy 1979).

The causes of peroneal tendon dislocations may be either idiopathic or traumatic (Rechfeldt 1976). Tendon dislocations are frequently secondary to flattening of the groove behind the lateral malleolus and/or insufficiency of the superior peroneal retinaculum. The condition also occurs in parietic patients. Traumatic tendon dislocation is most often due to an injury to the anterior attachment of the retinaculum associated with forced dorsiflexion in the ankle joint and simultaneous contraction of the peroneal muscles (Sarmiento & Wolf 1979). It may also be associated with fracture of the apex of the lateral malleolus (Murr 1961).

Treatment for acute dislocation of the peroneal tendons ranges from strapping or immobilization in plaster (Du Vries 1959, Sarmiento & Wolf 1975) to immediate operation (Jones 1932, Alm et al. 1975, Eckert & Davis 1976). It is agreed that recurrent dislocation should be operated (Du Vries 1959, Sarmiento & Wolf 1975, Zoellner & Clancy 1979). However, only small series reporting the results of such operations have been published.

We have assessed the results and complications in patients operated for recurrent disloca-

tion of the peroneal tendons by the Du Vries (1959) method.

Patients and methods

During the period 1965 to 1981, 42 patients were operated for recurrent dislocation of the peroneal tendons.

Patients with a history of fracture of the ankle or foot were excluded from the material. The patients were operated with a sliding bone graft from the lateral malleolus and screw fixation; postoperatively, a below-knee plaster cast was used for 6 weeks with weight-bearing.

Thirty-five patients attended a follow-up examination. One patient had had bilateral dislocation of the peroneal tendons, giving a total of 36 cases, 29 of which were right-sided. The material comprised 15 females and 20 males with a mean age of 23 (15-52) years at the time of operation. Eight cases were idiopathic and half of the traumatic cases were associated with sports.

In six patients the time interval between accident or onset of symptoms and operation was uncertain; in the remaining patients the median interval was 12 (1.5-180) months. The median period from operation to follow-up was 5 (1-12) years.

At follow-up, the patients were evaluated clinically, and both ankles were radiographed in three projections.

Subluxation or re-dislocation of the peroneal tendons was recorded separately and is not included in the assessment of clinical results.

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Results

Peroperative complications with the Du Vries method were as follows: 1) intra-articular screw (three cases), 2) fracture of the malleolus (two cases), 3) loosening of the screw (one case, re-operated the same day), and 4) fracture of the bone graft (two cases).

Subsequent complications were: 1) non-union of the bone graft (one case), 2) subluxation of the tendons (six cases), and 3) re-dislocation of tendons due to resorption of the bone graft (one case). The last-mentioned patient was later re-operated by the same method.

At follow-up, 26 cases were found excellent and five good.

The five cases judged fair or poor were one case of re-dislocation of the tendons, three cases of subluxation including one with resorption of the bone graft, and one case of instability without evidence of subluxation or dislocation of the peroneal tendons. These cases did not differ from the material as a whole regarding age, duration of symptoms and follow-up period.

In the excellent and good cases, three had subluxation at follow-up and none had redislocation. Twenty-one cases reported having had unstable ankles preoperatively, but only seven reported this condition at follow-up.

Fifteen cases had complaints related to the screw, mostly with pain caused by compression in boots or at palpation over the screw. In seven of these the screw was removed with relief of the symptoms.

Before the operation, only 7/31 cases were normally active in sports vs 24 at follow-up. Three cases had given up sports, all classified as fair or poor.

Radiographically, four cases had formation of osteophytes at the lateral malleolus, two cases calcifications behind the lateral malleolus and three cases resorption of the bone graft, in one case with only a fair result. All patients with osteophytes or visible calcifications and two of those with graft resorption were excellent or good.

Discussion

Most of the peroperative complications with the Du Vries (1959) method in this material

were due to too small a bone graft and problems in fixing the screw.

Only two of the patients were operated by relatively inexperienced surgeons. A reason for the difficulties encountered may be the hard malleolar cortical bone giving problems in obtaining a sufficiently large bone graft. Possibly, the best therapeutic results are obtained if the trauma is diagnosed and operated in the acute phase (Eckert & Davis 1976).

The functional results were unacceptable in one case of redislocation and in three of six cases with subluxation of the peroneal tendons; the differences in results may be due to differences in activity.

The formation of osteophytes or calcifications behind the lateral malleolus did not cause any problems. This has also been observed following rupture of other ligamentous structures around the ankle (Lindsjö 1980).

Using the Du Vries method, the bone graft should be of adequate size, and the situation of the screw should be checked by x-ray during the operation. The screw should be removed when the bone graft has united.

References

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