Phenol cauterization for ingrown toenails

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SUMMARY

A new clinic was set up to deal with all toenail problems referred to a large general hospital. Ingrowing toenails were the commonest problem dealt with and phenol cauterization, either partial or complete, was the standard form of treatment. Over a 2-year period 1013 phenol cauterizations were carried out on 631 patients. After a minimum of 12 months follow-up, the recurrence rate was 2.96%. All recurrences were successfully treated by repeat phenol cauterization. We conclude that phenol cauterization should replace surgical ablation in the treatment of ingrown toenails.

INTRODUCTION

A clinic was established to deal with all new toenail problems referred to Stobhill General Hospital, Glasgow, Scotland, and also to assess 'nail wedge resection with partial nail bed phenolization' as a standard treatment for ingrowing toenails. The clinic was run by one surgical senior house officer and one chiropodist.

Ingrowing toenail is a very common problem causing significant morbidity. Patients tend to be treated conservatively by their general practitioner in the first instance but the problem is often a recurring one with repeated episodes of sepsis. Most patients will eventually be referred to a surgical clinic or casualty department. If severe sepsis has supervened then simple nail avulsion is usually required prior to any definitive surgical procedure. The cycle of sepsis, referral, nail avulsion, regrowth and recurrent sepsis is often repeated several times before resorting to a surgical nail bed ablation, either partial or total (Zadik procedure).

Phenol cauterization of the nailbed is a definitive treatment which can be quickly performed at first presentation and is also suitable for use in the presence of sepsis. Previous reports on the technique (Robb & Murray, 1982; Cameron, 1981; Andrew &

Wallace, 1979) have suggested that the results are as good as, or better than, surgical nail bed ablation.

The 'toenail clinic' has been running for 3 years, and the results of the first 2 years' experience are presented.

PATIENTS AND METHODS

Six hundred and thirty-one patients with a mean age of 29.7 years (range: 10–81) were treated at the clinic in a 2-year period. There were 341 males and 290 females. Two hundred and nine patients (33.2%) had undergone a previous surgical procedure on the toe that was causing symptoms when seen at the clinic. Of these, 43 patients (6.8%) had undergone a previous Zadik procedure and presented with symptoms related to regrowth of nail spurs. At the time of treatment 299 patients (47.4%) had significant sepsis associated with the ingrown nails.

Patients were treated either by conservative chiropody measures or by phenol cauterization of the nailbed. Conservative measures included clearing and packing of the nail sulcus, and these were usually carried out on toes less severely affected than that prompting the patients attendance. The technique used for phenol cauterization was essentially as described by Ross (1969). A brief description of the technique of partial phenolization is illustrated in Fig. 1.

From our experience, we believe that several points in the technique deserve to be stressed:

- (1) Haemostasis is essential to maximize the cauterizing effect of the phenol.
- (2) Nail nippers are used to split the nail rather than scissors, as the flat bottom blade minimizes trauma to the nail bed and prevents elevating the remaining central portion of nail.
- (3) If only one side of the nail is being treated, a full quarter of the nail-width is removed, slightly less being removed from each side when both margins are involved.
- (4) When removing the loosened nail fragment, it is important to twist it towards the midline of the toe as this minimizes the chance of leaving a splinter in the nail sulcus.
- (5) Whenever possible, partial phenol ablation was performed in preference to total ablation, even if this required treating both sides of one nail. Leaving a narrow but normal nail is cosmetically more acceptable and avoids the risk of hyperkeratosis which may develop on an exposed nail bed.

Patients were initially reviewed frequently until a pattern was established. Currently the patients attend their health centre nurse at 48 hours for a change of dressing. The patient then changes his own dressing, as dictated by the amount of serous exudate, until reviewed at the clinic at 2 weeks.

Patients were advised to use aspirin or paracetamol if analgesics were required. Most patients, however, required no post-operative analgesia.

Fig. 1 (a) Ring block anaesthesia is obtained using 1–2 ml of 2% Lignocaine.
 (b) An Esmarch tourniquet is applied and ingrowing nail nippers are used to split the nail down to the cuticle.
 (c) The proportion of nail below the eponichium is split using a chisel-point blade.
 (d) The nail segment is loosened from the nail bed, grasped by forceps and removed.
 (e) The exposed nail bed is cauterized with an 88% aqueous phenol solution for 3 minutes.

RESULTS

A total of 1013 phenolizations were performed, 776 partial and 237 complete, an average of 1.6 procedures per patient. Partial phenolization of both sides of one nail was carried out on 96 occasions.

Patients were able to resume normal duties early, usually within 24 hours. There were no cases of spreading sepsis or osteitis resulting from treatment. After complete phenolization a small number of patients developed hyperkeratosis of the exposed nail bed and, in four cases, this produced moderate discomfort.

Only patients with a minimum follow-up interval of 12 months were included in the study. A total of 30 recurrences (2.96%) were seen, the incidence being the same after either partial or total phenolization. In 20 of these cases (1.97%), the recurrence was symptomatic, requiring further treatment and, in all of this group, a second phenolization was successful.

DISCUSSION

This is a large series with a reasonably long follow-up. It confirms the low recurrence rate found in smaller series by other authors (Robb & Murray, 1982; Andrew & Wallace, 1979). The results are certainly better than those reported for surgical ablation (Andrew & Wallace, 1979; Murray & Bedi, 1975). The low recurrence rates may be partly due to the small number of staff involved in performing the phenol ablation but it should be stressed that this is a simple procedure at which junior staff can easily become proficient.

Phenol ablation does not involve any soft tissue incision or resection and, because of this, there is very little post-operative discomfort; a point confirmed by Robb & Murray (1982) and Cameron (1981).

In conclusion, phenol ablation is simple and consistently effective (Robb & Murray, 1982; Cameron, 1981; Andrew & Wallace, 1979); it is quick and produces minimal post-operative discomfort; and, although it is a definitive treatment, it can be carried out in the presence of sepsis.

All these features make phenol ablation ideal for use in a busy general hospital clinic or accident and emergency department, and there is no obvious reason why it should not replace surgical ablation for the treatment of ingrown toenails.

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REFERENCES

- Andrew T. & Wallace W. A. (1979) Nail bed ablation—excise or cauterise? A controlled study. *British Medical Journal* 1, 1539.
- Cameron P. F. (1981) Ingrowing toenails: an evaluation of two treatments. *British Medical Journal* 283, 821–2.
- Murray W. R. & Bedi B. S. (1975) The surgical management of ingrowing toenail. *British Journal of Surgery* 62, 409–12.
- Robb J. E. & Murray W. R. (1982) Phenol cauterisation in the management of ingrowing toenails. *Scottish Medical Journal* 27, 236–9.
- Ross W. R. (1969) Treatment of the ingrown toenail. *Surgical Clinics of North America* 49, 1499–507.

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