

TECHNICAL SECTION:

Technical tutorials, notes and tips

Technical tutorial

Banding and injection of piles

WH Thomson

Department of Surgery, Gloucestershire Royal Hospital, Gloucester, UK

Whereas it may be assumed that a general surgical readership has no need to be informed that the condition called haemorrhoids, or piles, is the observed result of disruption and displacement of otherwise normal structures the anal cushions, and that the only symptoms reliably attributable are signalled by its etymology, namely bleeding and protrusion (*haemorrhoids* (Gk) = discharging blood; *pila* (L) = ball), many may not realise that the public – and in fact many in general practice – have an entirely different perception. Most if asked would offer pain, soreness, and itching. However, whereas the discomfort of swollen temporarily irreplaceable piles is often described as pain – indeed as agony by the more graphic – and ‘attacks of the piles’, due to clotting of their (uniquely) sacculated venous plexus, are undoubtedly painful for several days, pain, itching, and soreness are generally anodermal or perianal in origin, the result of a fissure, or of an anodermatosis causing radial hairline cracks, hyperkeratosis and punctate excoriations (which in my view explains much of the success of proprietary pile preparations). Relatively trivial though the disease is, therefore, in no area of surgical endeavour can assessment be of greater importance, for unless the patient’s disrupted anal cushions can reasonably be held to account for the symptoms they may be an incidental finding and their ablation by whatever method unavailing and so a certain recipe for justifiable rancour, particularly if – as is likely, given the region’s great sensitivity – painful in its effect. Aware of this, the surgeon will find ambulatory treatments satisfyingly successful.

Four types are advocated, banding, injection, infra-red coagulation, and diathermy destruction, but of all banding has been shown to be the most effective and is certainly straightforward and employs robust reusable instrumentation. The salient steps of the first two procedures will be described separately but the following are common to both:

- Neither needs either anaesthesia or sedation.
- Both are performed through a proctoscope, which ought to be of sufficient internal diameter (22 mm) for adequate assessment, with the patient composed comfortably on their left side (for right-handed operators).

- Not all three anal cushions are necessarily disrupted. The symptomatic one(s) will be distinguished by bulk and laxity – often only evident when the patient is asked to strain down with the proctoscope end at the dentate line – and/or an inflamed surface.
- A subsidiary mid-line posterior anal cushion is occasionally the sole source of symptoms but easily missed when as often happens it is displaced below the dentate line.
- Whereas both may be performed at the original consultation, in my view it is preferable to inform the patient then about the principal effects, and possible complications, to provide an explanation sheet and to arrange a second appointment for the procedure with provision for an emptied rectum and someone to drive home afterwards, with the patient having started stool softeners the previous night and taken analgesic tablets an hour or so before.
- At the procedure’s completion, it is as well to lie the patient supine for a few minutes in case of fainting.

Banding

- Banding works by reducing the excessive bulk of the disrupted anal cushions, and by both encouraging adhesion of the remainder to the underlying internal sphincter through the inflammatory reaction and pulling the anodermal part back into the anal canal. Its aim, therefore, is to strangulate a ‘polyp’ of the insensitive mucosal/submucosal part of the pile above the dentate line.
- The operator will choose the type of bander to use from the range available and have several loaded and to hand at the time, but will find single operator instruments convenient and no pile grasper better suited to the task than Irving Moore’s nasal conchal forceps.
- Before band placement, the operator should pause and appraise, judging through the proctoscope what part of the pile to grasp for optimum effect. Selection of the correct site enables the maximum amount of disrupted tissue to be banded without encroaching upon the sensitive anoderm. A second ‘polyp’ can be raised from the same pile if too bulky for one, or the originally snared part can be augmented by pulling the first one back into the bander and incorporating a further ‘polyp’ of tissue beyond it, like two beads on a string.
- High banding used to be advised to reduce the chance of pain but I have discerned no extra discomfort from bands placed on the actual prolapsing mucosa, and without doubt greater efficacy.
- All piles may be banded at one sitting since there is no evidence that the pain therefrom is greater.
- The patient is then driven home – again in case of faintness – armed with analgesia and an understanding of the very rare possibility of secondary haemorrhage. Because of it, I do

not carry out banding within 3 weeks of a patient's trip abroad.

- Most patients are in moderate discomfort afterwards. However, excessive pain from an inadvertently low band may be addressed by local anaesthetic injection or scissor division of the band. An occasional patient – usually a young tough-looking male – will appear to suffer inordinately and even require temporary admission for intramuscular analgesia despite appropriate band placement.

Injection

- When piles were attributed to varicosity, sclerosant injection was thought to work by reducing the supposed pressure effects of the unvalved column of portal blood. Nowadays, any benefit is attributed to the induction of fibrosis.
- The principle, therefore, is to inject an intensely irritant solution, 5% phenol in arachis oil, into the submucosa of the pile.
- Very great care must be taken to prevent mis-location of the phenol. Trans-mural injections in the male can have particularly disastrous consequences: both prostatic abscess and permanent impotence (from infiltration around the erigent nerves – only a few millimetres away from an anterolaterally directed needle) have occurred and are probably medically indefensible. Haematuria has also been reported.
- Injection is performed using either Gabriel's glass syringe and shouldered needle or its modern purpose-built disposable counterpart. It is recommended that the injection be placed in the upper part of the pile, injecting 3–5 ml at each site to a maximum of 15 ml. A quick jab ensures passage of the needle which may then need to be withdrawn to locate it in the submucosa, a distance which can be estimated from the length of needle exposed, measured to its shoulder.
- Correct siting must be verified by a trial injection of a small amount which should be seen to raise and pale the overlying mucosa and be crossed by blood vessels – the so-called 'striation sign'. Intra-mucosal injection will cause intense blanching and, if sufficient, result in mucosal necrosis and ulceration, and so should be avoided. Intravenous injection must not occur. If no mucosal swelling occurs immediately with a trial injection, the needle must be withdrawn further.
- The Control of Substances Hazardous to Health (COSHH) regulations concerning phenol have recently been revised and the Health and Safety Executive (HSE) has issued a chemical hazard alert notice on its use. It is still available for medical purposes but under more stringent control.
- Although the process of injection is painless, patients should be forewarned that considerable discomfort may ensue.

Correspondence to: Mr WH Thomson, Consultant Surgeon, Gloucestershire Royal Hospital, Great Western Road, Gloucester GL1 3NN, UK. Tel: +44 1452 394683; Fax: +44 1452 394813

Technical note

A new technique for local anaesthesia in breast surgery

IG Finlay, P King, SJ Cawthorn

Breast Care Centre, Frenchay Hospital, Bristol, UK

Background

A high proportion of breast surgery is performed under local anaesthesia. It can be difficult to achieve adequate anaesthesia using conventional local infiltration of anaesthetic around breast lumps, and little is written in the literature or standard texts regarding exact techniques. We describe what we believe to be a new technique, which results in reliable local anaesthesia of breast tissue.

The technique aims to deliver a bolus of local anaesthetic into the submammary space between the retro-mammary condensation of Scarpa's fascia and the deep fascia overlying pectoralis major, resulting in shallow pool of anaesthetic lying deep to the breast tissue to be excised. This effectively blocks the lateral and anterior cutaneous branches of the upper intercostal nerves as they pass through the submammary space to supply the overlying breast tissue.¹

Method

Having first infiltrated the line of incision with local anaesthetic, the breast lump is fixed in place against the

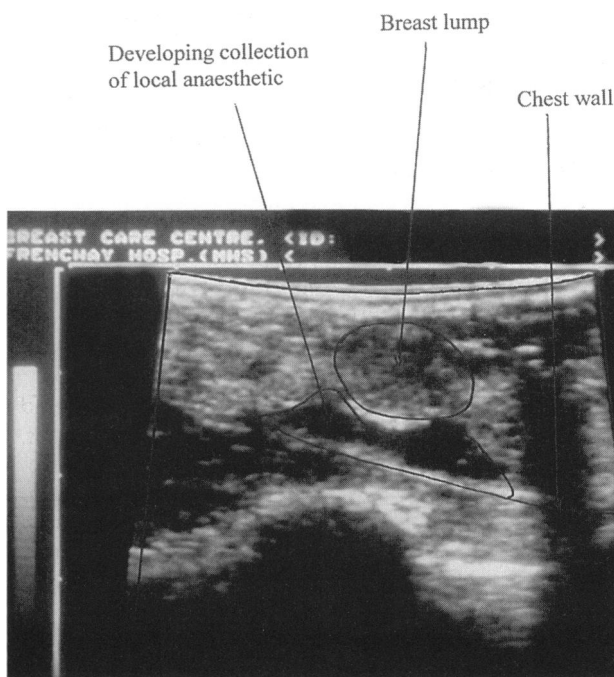


Figure 1 Ultrasound scanning to guide anaesthetic injection.