

8 REPAIR OF ANAL SPHINCTER INJURIES

Immediate Repair

Anal sphincter tears seen within 24 hours of delivery should be repaired at once. This is not a minor operation. The patient's future continence depends on the skill of the repair.

It is important when carrying out the repair to realise that torn anal sphincters retract to the 3 and 9 o'clock positions.

The repair must be carried out in an operating theatre with good lighting, instruments and assistance. Repair under local anaesthesia is possible, but it is better to have the patient under a spinal or general anaesthetic. The patient should come to theatre with an empty rectum.

The ano-rectal mucosa are closed first; then the torn ends of the external sphincter are identified (the internal sphincter cannot be identified as a separate layer). These ends have to be sutured accurately, taking quite big bites using a slowly absorbable suture (preferably 2-0 PDS; if PDS is not available then a heavy vicryl or dexon). Two to three sutures are needed. The perineal body is then repaired followed by the vagina and perineal skin.

Secondary Repair

If the repair cannot be performed immediately, it is best to wait several weeks but most patients present some years after their injury. Sometimes, patients with an old complete tear say that they have no symptoms, so it is important to be sure that a patient really does have troublesome faecal leakage before recommending repair. In the best hands, over 90% of repairs restore complete continence. There is a one year follow up study underway at the moment and the interim results actually show a 95% complete continence rate.

Because the torn ends of the sphincter will have retracted round half the anal circumference, simply freshening the margins of the tear and suturing them is unlikely to give a good result. The correct procedure is illustrated in Figure 8.1.

First identify where the ends of the anal sphincter are likely to be. This is not difficult as the torn ends of the sphincter pull on the overlying skin and cause a dimple. There are also creases in the skin, radiating out from the anus where the underlying anal sphincter is contracting. Where these lines end is where the torn ends of the sphincter lie.

It is helpful to use a liberal amount of 'jungle juice' (a dilute mix of lidocaine with adrenaline) to help with dissection and bleeding. It is a vascular area and the adrenalin in the jungle juice certainly helps to maintain haemostasis and it also helps to find the tissue planes by hydrodissection.

Place Allis forceps on the vaginal verge at the level of where the posterior forchette will be—usually just over the level of the torn sphincter. Pull the Allis forceps together to ensure that the perineal and forchette look normal at that level. A common mistake is to make the perineum far too long, causing pain and dyspareunia. Make your incision along the junction of the anal and/or rectal mucosa and then along the junction of the perineal skin and anal mucosa to the level where the ends of the anal sphincter lie.

Mobilise the vagina off from the anus, free the perineal body from the skin and free the anal mucosa slightly. Then undermine the skin over the anal sphincter and grab the anal sphincter with Allis forceps. Make sure it is nicely mobile but remember that the nerve supply to the anal sphincter comes in at 5 and 7 o'clock, so do not mobilise beyond here.

Once both ends of the sphincter are mobile you are ready to suture. It is useful to keep one Allis forcep on either end of the torn sphincter and hold it out of the way by using an artery forcep to secure the Allis to the drapes laterally. This will ensure that you don't lose the sphincter while you repair the anus/rectum.

First repair the anus with 2–0 vicryl in two interrupted layers taking good bites of the muscularis. The sphincter can be repaired end to end, or by an overlapping repair, or some people even mobilise the internal and external sphincter separately and repair them separately. Sometimes you can define the internal and external sphincters well as the internal sphincter is more white, being smooth muscle, and the external sphincter is more red being striated muscle. I just repair the sphincter end to end with a slowly dissolving 2–0 PDS suture and get good results at one year follow up. Others argue that the overlapping technique is superior. For patients with chronic injuries the question hasn't been settled.

Then rebuild the perineal body with the remaining PDS and lastly repair the vagina and perineal skin. I use a continuous locking suture to the vagina as the locking suture helps maintain the vaginal length, and I use interrupted sutures to the perineum. On the rare occasion an infection will occur in the wound site and if there are interrupted sutures it is easy to remove one suture and let the pus drain. But if a continuous sub-cuticular suture is used, then this can't be done.

Gently pack the site and leave a Foley catheter in place. The pack and catheter can be removed the following day. I ask patients once they are mobile to have gentle washes twice a day and pat dry, just to keep the wound clean.

The patient is usually kept on fluids only for the first post-operative day, then a light diet on day two. A full diet with a mild laxative can be given on the third day. I discharge them when they are eating well, passing stool normally and are comfortable.

Ongoing Problems

Some patients will return to you still complaining of incontinence after they've had a perineal tear repair. When you examine them the perineum is intact, but if you look closely, you will see that the skin over the anterior anus is smooth and it doesn't have the radiating lines which signal a contracting sphincter underneath. Either the sphincter has torn apart again or the sphincter wasn't identified and repaired properly at the first operation.



Figure 8.1

a) A fourth degree perineal tear. The Allis forceps are showing the location of the end of the torn sphincter on the left.



b) Grasping where the two ends of the sphincter are, bring them to meet in the midline. The perineum and posterior fourchette looks normal.



c) Incised along the junction of the vaginal and anal mucosa to the site of the torn ends of the sphincter.



d) Mobilise.



e) Grasp the end of the torn sphincter. It's located just adjacent to the distal anal mucosa. Mobilise both ends, left and right.



f) Repair the anal mucosa with interrupted sutures from the apex to the anal verge.



g) Anus repaired in two layers.



h) The anal sphincter is repaired with 2-0 PDS.



i) Vagina and perineum closed.



Figure 8.2 (above)

The patient originally had a fourth degree tear that was repaired at delivery and only the perineal skin was sutured. The sphincter remained torn, the apex of the tear wasn't repaired and she had a small skin bridge over the perineum.

A small operation is needed to mobilise the sphincter again, preferably with a slowly absorbing 2-0 PDS suture. To do this, infiltrate the perineum and around the anus with saline or jungle juice, incise in the midline along the perineum and undermine the skin laterally off the perineal body and down over the anal sphincter. Grasp the muscle tissue just laterally to the anal canal either side and repair this. You sometimes find that after mobilisation there is a defect on the anal verge, just into the mucosa. Repair this before you repair the sphincter. After repairing the sphincter, rebuild the perineal body over the top and then the skin. Post-operative management should be the same as for a fourth degree tear. (See the final paragraphs of Secondary Repair above)

You will also find many patients having had a tear repaired incorrectly. The apex of the ano-rectal defect might not have been secured and a recto-vaginal fistula (RVF) results. I often see cases where only the skin over of the perineum has been repaired so all that remains is a skin bridge over the perineum, an RVF behind and the sphincter still avulsed. It is best to cut the skin bridge open to recreate the fourth degree tear and do a formal repair. (Figure 8.2)