Nottingham University Hospitals NHS
NHS Trust

Double Z–plasty with V–Y advancement – a treatment for isolated, persistent, posterior fourchette fissuring

Target audience

- Gynaecologists (all grades), gynaecology and ward nurses, GPs, vulval clinic teams (includes dermatologists and GUM physicians)

Background

- Isolated, persistent, posterior fourchette fissures are a cause of dyspareunia.
- The aetiology may be
    - *Contracture* e.g. previous surgery (Fenton's), post radiotherapy or due to scarring vulval disease e.g. lichen sclerosus.
    - *Idiopathic* (following intercourse when the skin in advertently traumatized and split),
- The incidence and clinical pathway patients follow remains unknown. Many patients are referred to vulval clinics and sexual therapy services.
- Patients usually present with painful sex. There may be associated fresh bleeding when the contracture splits and the fissure is 'opened' after attempted sex (figure 1). Usually the fissure heals quickly and the contracture reforms. Patients usually complain of the fissure in the same place.
- With a healed fissure, there may be little to see in the clinic. However, there might be subtle signs of scarring at the posterior fourchette; this might represent a long-term anatomical defect in the skin that does not heal completely (figure 1).
- Conservative management includes massage and densitisation, use the good lubricants during intercourse, reassurance and addressing any co-existing pelvic floor hypertonicity/ sexual dysfunction (e.g. vaginismus response). There may be some value in a short trial of topical corticosteroids to soften the contracture (e.g. Betnovate ointment nightly massaged into the vulval skin for one month).
- *The evidence base for management from the literature is weak.*
- Skin fissuring leads to pain which leads to avoidance of sex. Some patients have significant emotional and cognitive distress as a major part of the presenting complaint.
- Surgical refashioning of the introitus may help to release the contracture thus avoiding the fissure developing.

Figure 1 - posterior fourchette fissuring (healed and open)

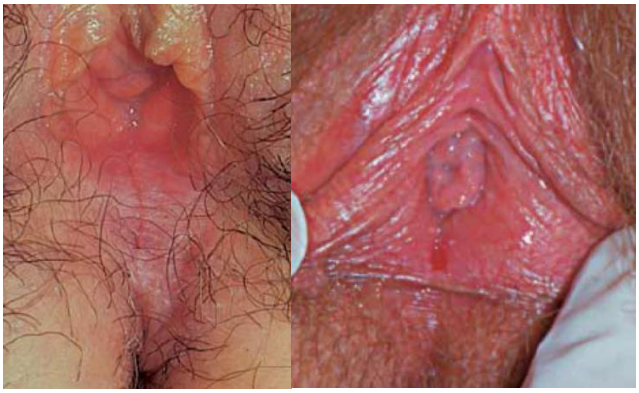
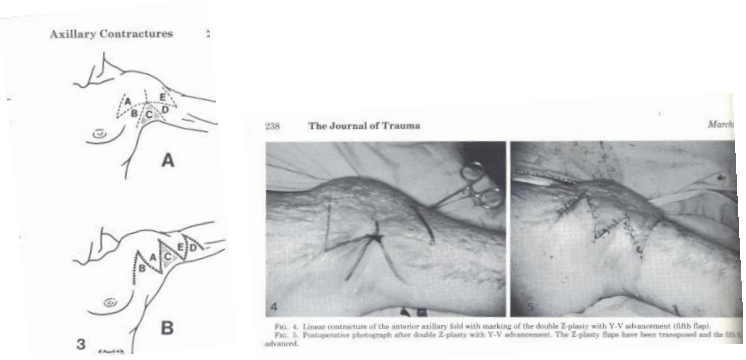


Figure 2 - double-opposing z-plasty - 5 triangles are formed and are re-opposed in order to release the contracture. A and B are swapped and D and E are swapped. C is advanced.



Indications for Double Z–plasty

- Idiopathic posterior fourchette fissuring
- Failed Fenton's
- Scarring due to vulval disease e.g. lichen sclerosus.

Exclusions

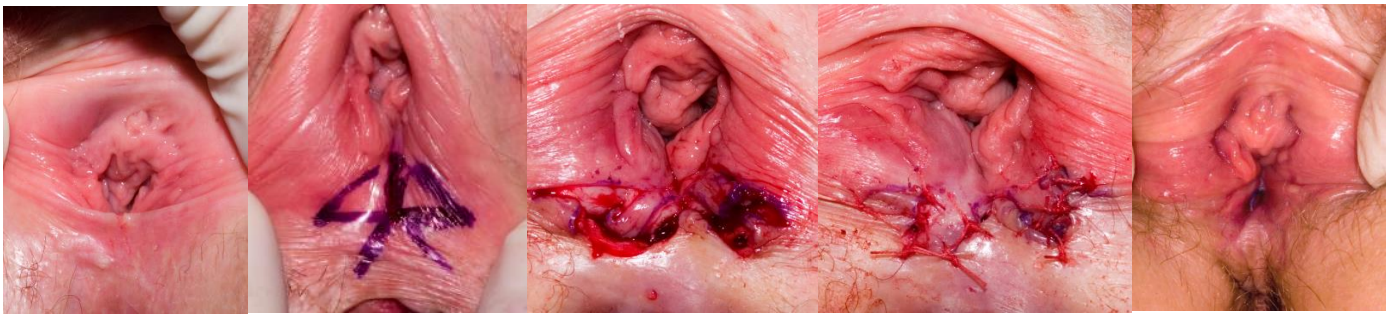
- Fissuring at different anatomical sites
- Poorly treated vulval skin disease
- Vulval infection
- Local lack of oestrogen

Technique

- Z-plasty is standard plastic surgery technique. It can elongate a contracted scar or rotate the scar tension line to improve function. The middle line of the Z-shaped incision (the central element) is made along the line of greatest tension or contraction, and triangular flaps are raised on opposite sides of the two ends and then transposed (see figure 2). The length and angle of each flap are usually the same to avoid mismatched flaps that may be difficult to close.
- The transposition of two triangular flaps. The incisions are designed to create a Z shape with the central limb aligned with the part of the scar that needs lengthening or re-aligning. The traditional 60° angle Z-plasty will give a theoretical lengthening of the central limb of 75%.
- For fourchette fissuring we suggest the *double-opposing* z-plasty (sometimes called a "jumping man" flap – the 'man' related to the appearance of skin marks prior to incision).

For a video of the procedure please see http://www.jonathanfrappell.co.uk/pages/procedures/plymouth-procedure/78

Figure 3 – surgical steps of double-opposing z-plasty



Side effects and complication

- The procedure is usually carried out under general anaesthetic as a day case.
- Post-op care includes keeping the skin clean, avoid irritants and clinical review 2 weeks later.
- Bruising and wound breakdown may occur.

Other considerations

- Think about topical oestrogen replacement as an adjunct.
- Post-operative care might include vaginal dilators and psychosexual support.

Conclusions

- Double Z–plasty with V–Y advancement may be considered in selected patients with isolated, persistent, posterior fourchette fissuring.
- Our local experience with reasonable long term outcome in terms of patient satisfaction is favourable with a 70% success rate for treatment (unpublished).

References

Scott J Vulvectomy, introital stenosis, and Z plasty. Am J Obstet Gynecol. 1963 Jan 1;85:132-3.
Wilkinson EJ. Introital stenosis and z-plasty. Obstet Gynecol. 1971 Oct;38(4):638-40.
https://www.dermnetnz.org/topics/recurrent-fissuring-of-posterior-fourchette

Acknowledgement to Mr Frappell who has championed this technique over the years.

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