

Repair of anorectal mucosa in fourth degree Obstetric Anal Sphincter Injury: A Case Series with a continuous, non-locking and sequentially knotted suturing method (Onyeka Suturing Technique)

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Background

Appropriate repair of the anorectal mucosa in fourth degree obstetrics anal sphincter injury (OASI) restores anorectal mucosa integrity and mitigates against potential morbidity and litigation from this complication. However, there is a paucity of evidence to guide practice in relation to the optimal repair of the anorectal mucosa in fourth degree OASI. An established suturing technique (Onyeka suturing technique) that enables pelvic floor repair as a day case procedure (without vaginal packing or catheterisation) was considered an appropriate option due to its liquid proof and haemostatic benefits without scarring.

Results

Table 1 below represents a summary of both maternal and foetal profiles of the patients with 4th degree OASI in this series. All patients were satisfied with their repair and there were no associated complications of infection, wound break down, tissue necrosis, perineal pain, dyspareunia, fistula formation, flatal or faecal incontinence.

Discussion

Current recommendations relating to the repair of torn anorectal mucosa in OASI are often based on opinions of guideline committees and extrapolations from non-obstetrics studies. Obstetricians are therefore encouraged to report their experience in this area in order to better inform decision making in managing anorectal mucosal injury in OASI.

Conclusion

Our findings demonstrate that the Onyeka suturing technique can be used as a safe and effective method of anorectal mucosa closure in fourth degree OASI.

Methods

A retrospective review was conducted of 5 consecutive fourth degree OASI in which the torn anorectal mucosa was repaired with the Onyeka suturing technique. The repairs took place between February 2015 and September 2015 at Casey Hospital, Monash Health in Victoria, Australia. All repairs were performed or supervised by the same surgeon (B. Onyeka). All patients were reviewed at 6 weeks in the clinic after repair then further telephone review took place between 10-12 months post operatively.

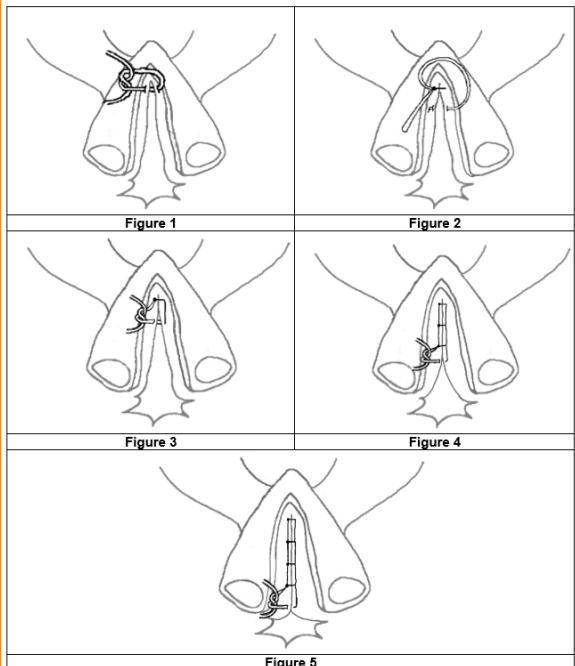


Figure 1

Step 1a: The needle of a 3-0 polyglactin suture material is passed through both lips of the torn anorectal mucosa at a point about 5mm below the apex and 5mm from the margin of the tear.

Step 1b: With the aid of an assistant, an atraumatic tissue forceps is used to displace both lips of the torn anorectal mucosa above the suture line to the patient's left side and held in position until the first set of knots are secured.

Step 1c: The needle free end of the suture material that is on the patient's left side is looped over the apex of the tear and onto the patient's right side. Ensure that the needle free end of the suture material is at least 10cm in length as this would be used to complete the repair.

Step 1d: The knots are then secured with two to three reef knots on the side of the anorectal mucosa on the patients right incorporating the apex of the tear. No end of the residual suture material is cut until the repair is completed.

Figure 2. The needle is then passed through both leaves of the torn anorectal mucosa (from the patient's left to right) about 5mm below the first knot and about 5mm from the margin of the tear. The knots are again secured with two reef knots directly below the first knot with both leaves of the torn anorectal mucosa above the suture line displaced to the patient's left as in step 1b to facilitate this.

Figure 3 and 4. This involves repetitions of step 2 above making sure that all the knots are on the same side with the subsequent knots about 10mm below the one above.

Figure 5. The final stitch is then applied similar to steps 2 and 3 and knotted in a manner that secures the proximal end of the anorectal mucosa tear as in the steps above All knots are placed on the same side and parallel to both leaves of the torn anorectal mucosa.

Table 1 - Maternal, Birth Method, and Neonatal Characteristics

Gravidity and Parity	Gestation	Foetal Weight	Head Circumference	Mode of Delivery	Episiotomy
G1P0	38+5/40	3370g	49cm	Normal Vaginal	Right mediolateral
G2P1	38+2/40	4520g	36.5cm	Normal Vaginal	Nil
G2P1	41/40	4190g	36cm	Normal Vaginal	Nil
G2P0	37+5/40	2930g	32.5cm	Neville Barnes Forceps	Right mediolateral
G2P1	41+2/40	2900g	35.5cm	Neville Barnes Forceps	Right Mediolateral

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