Original Article

A Friendly Approach to Repair Fourth Degree Perineal Tears

R A Khanam[1] , N Sultana[2], A Rubaiyat[3], J Ahmed[4], N Sayeeda[5], TK Mridha[6]

Abstract:

To make the gynaecologists familiar with the procedure of continuous repair of rectal mucosa and repair the anal sphincter by other than figure of 8 suture and to compare the effectiveness of these procedures with the traditional procedures this study was planned. This was a observational comparative study. This study was carried out in one public medical college hospital and two private hospitals in Dhaka city and out side. Total 18 (Eighteen) patients were included in this study . Age, parity, residence were different but all had fourth degree perineal tear. Tears were repaired by traditional approach in half of the patients who were grouped under A and with the new approach in another half, grouped under B. Follow up was carried out at an interval of 6 weeks, 12 weeks, 24 weeks in both groups and the findings were compared. Among 18 patients a large number of women were mother of one child and were of 21 -25 years age group. At post operative period - wound infection was nil. Perineums were well established in all cases. On follow up at 24th week-pain in perineum and dyspareunia was nil in all cases, though this was present at early weeks in few cases. Faecal incontinence was absent in any patient by 24 weeks postoperatively. In early follow up periods there were some faecal incontinence, pain and dyspareunia in group A but les with group B. So, continuous repair of anal mucosa and repair anal sphincters other than figure of eight seems better regarding technical easiness, better compliance for the surgeon and less traumatic to the rectal mucosa and ultimately better results.

Key words : Fourth degree perineal tear, anal sphincter, continuous repair of anal mucosa

1. Dr. Rawshan Ara Khanam, Associate professor, Obs & Gynee, MMC.
2. Dr. Nilufar Sultana, Associate Professor, OBGYN, DMC, Dhaka.
3. Dr. Afrin Rubaiat, Honorary Medical Officer, BSMMU, Dhaka.
4. Dr. Jeba Ahmed, Junior Consultant, Shaheed Suhrawardy Hospital, Dhaka.
5. Dr. Nur Sayeeda, Assistant Professor, OBGYN, DMC, Dhaka.
6. Dr. Tapash Kumar Mridha, RMO, Asha Clinic , Nawabganj , Dhaka.

Corresponding Author:
Dr. Rawshan Ara Khanam

Introduction:

Despite the gross injury in the perineum many women remains comfortable by using the levator ani muscle as a sphincter. The main problem in these cases is involuntary escape of flatus. Incontinence of faeces only occurs when it becomes fluid.[1] Risk of Obstetric anal sphincter injury is 1% of all vaginal deliveries. Up to 57% of women with third or fourth degree tear suffer from - faecal urgency, incontinence of flatus, incontinence of liquid and/ or solid stool.[2]

According to RCOG Guide Lines perineal tears are categorized in to-

1. First degree : Injury to perineal skin only
2. Second degree :Injury to the perineal muscles
3. Third degree : injury to the perineum involving partial or complete disruption of the anal sphincters
   - 3a: < 50% of external anal sphincter (EAS) thickness torn
   - 3b : >50% of EAS thickness torn
   - 3c : Both EAS and internal anal sphincter (IAS) torn
4. Fourth degree: Injury to anal sphincter complex and anal mucosa.[3]

Traditional techniques of repair of fourth degree perineal tear is a difficult procedure. Special technique of repairing the rectal mucosa by so many interrupted sutures made it cumbersome. It needs much technical competence for good repair and healthy outcomes. Repair of anal sphincter by figure of 8 suture is not recommended for all cases. This study was planned to make the gynaecologists familiar with the procedure of continuous repair of rectal mucosa and repair the anal sphincter in other techniques and to compare the effectiveness of these procedures with the traditional procedures.

Materials and Methods:

A comparative study on repair of fourth degree perineal tear was carried out in Shaheed Suhrawardy Medical College Hospital and two other private clinics from July 2007 to July 2011. Traditional technique in repair of fourth degree perineal tear were followed for 10 cases from July 2007- July 2009. Modified technique in repair of anal mucosa and anal sphincters were performed in 10 cases from Aug 2009 - July 2011.

Total patients were grouped into A and B for the convenience of study. Those 8 patients, who have had traditional repair (interrupted sutures in anal mucosa repair and anal sphincter repaired by figure of 8) were included in group A and others were grouped in to B.

In all cases 3 days preoperative bowel preparation were ensured. Post operative care were same for all patients in both public and private settings. All operations were done under spinal anaesthesia.

Suture materials used for repair of anal mucosa were Vicryl -000 , for repair of EAS used Vicryl - 00 and for IAS Vicryl 00. For repairing perineal muscles in all cases Vicry l00 were used. In perineal skin catgut 00 were used in all cases. During post operative period follow up done at a regular interval. In each follow up visit attention was given on- anatomical intactness of perineum, its functional integrity like-complaints of faecal urgency, incontinence of flatus and/or faeces, pain in perineum and dyspareunia. Evaluation performed at - 6 weeks, 12 weeks and 24 weeks after operation. Follow up results were compared among two groups.

Procedure of operation:

Steps of repair of perineal tears (traditional method)

* Dissect the posterior vaginal wall off from the rectal mucosa following an incision over fused mucosa
* Rectal wall is sutured by interrupted sutures ,placing the knots inside the lumen
* Pararectal fascia is approximated over the first layer by interrupted sutures
* Torn ends of sphincter ani externus is approximated by a figure of 8.
* Excise redundant portion of vaginal mucosa
* Fibromuscular tissues of perineal body is repaired by interrupted sutures
* Rest of the steps are like that of perineorrhaphy[4]

Modification done in areas (newer approach)

* 'H' incision given on fused mucosa and over the torn ends of sphincter ani externus
* Torn ends of the sphincters are mobilized well and held by Alli's tissue forceps
* Rectal wall is mobilized well and sutured continuously starting from the apex by using 3-0 vicryl with round body needle
* Repair of sphincter -

  The torn ends of the EAS are approximated in front of the repaired anal mucosa by

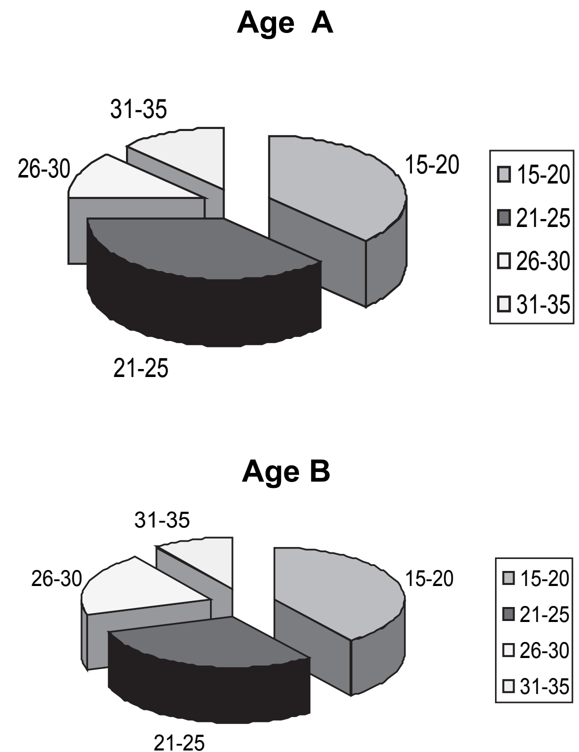
  -end to end with interrupted mattress sutures with vicryl 2-0 in case of <50% sphincter tear

  - overlap techniques in >50% tear

  Internal anal sphincter repaired by-
* end to end or overlap technique 5

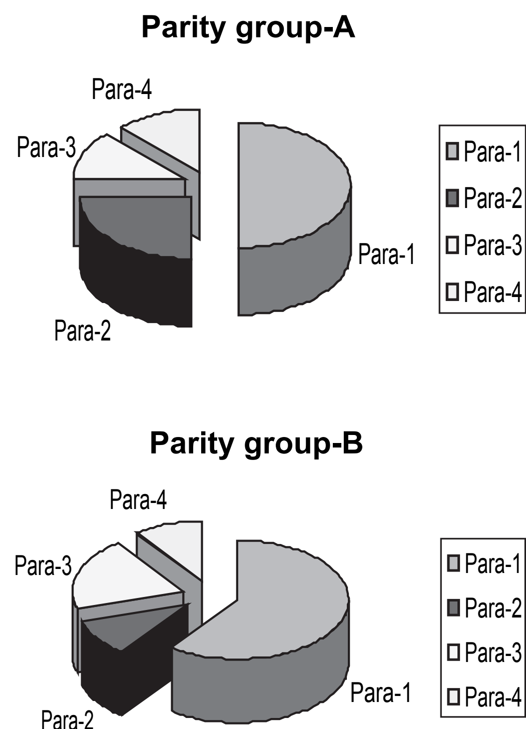
Results:

Fig. I Age distribution of the patients



A large group of women were from 21-25 years age group and the next group were from 15-20 years in both A and B groups.

Fig. II. Parity of patients



About 50% women of group A & more than 50% women of group B had fourth degree perineal tear during their first delivery.

There was no wound infection in any case. On inspection perineum was well established in all cases. In early weeks few patient had complaints of dyspareunia but by 24 weeks it was absent in all cases.

Table I . Pain in perineum

Follow up Schedule	Group A		Group B	
Visit at weeks	No. of pt. having pain	Percent	No. of pt. having pain	Percent
6 week	8	100	8	80
12 week	2	25	2	20
24 week	0	0	0	0

During follow up at 6 week pain was present in all cases in group A which has been reduced to nil by 24 weeks but 80% women of group B had suffered from perineal pain at 6 weeks which was 20% less than Group A.

Table. II Follow up of continence

	Group A				Group B			
Follow up time	Continent		Incontinent		Continent		Incontinent	
Weeks	No.	%	No.	%	No.	%	No.	%
6	6	75	2	25	9	90	1	10
12	7	87	1	12.5	10	100	0	0
24		100	0	0	10	100	0	0

On follow up at 6 weeks 25% women from group A and 10% of group B had some incontinence of flatus and faeces.

Discussion:

A continuous suture have the advantage of distributing tension along the entire suture line and helps to prevent a gap in the closure that could occur from ischemia if an interrupted suture is tied too tight. A full thickness suturing of anal mucosa is the safest method as this tissue is quite friable. There was recommendation for use of 'figure of 8 repair of sphincter only in those cases for haemostatic purpose (one trial including 41 women). [5]

Between overlap and end to end sphincter repair technique- RCT (41 women) -3 months follow up showed no significant difference. RCT (24 women) -24 months follow up showed no significant difference in anal continence.[6] A systematic review of 279 women showed no significant difference in perineal pain, dyspareunia, flatus incontinence and faecal incontinence in two groups of sphincter repair over 12 months follow up.[7] Identification of third and fourth degree perineal tear is very important. Proper repair of anal sphincter complex is crucial to stop incontinence. In early follow up periods there were some faecal incontinence , pain and dyspareunia in group A but not with group B . So, continuous repair of anal mucosa and repair anal sphincters other than figure of eight seems better in this present study .

Limitations of the study:

There was no scope for evaluation by using endoanal ultrasonography and anorectal manometry . Sensitivity of digital examination in follow up is only 43% for identifying EAS defect in comparison to anal ultrasound.

Conclusion:

Continuous repair of anal mucosa and end to end or overlapping repair of anal sphincters seems better regarding technical easiness, better compliance for the surgeon and less traumatic to the rectal mucosa and anal sphincters and ultimate better results. Familiarity of Gynaecologists in Bangladesh with the easier repair techniques having better results of fourth degree perineal tears will lessen the suffering of young women and will improve the confidence of the surgeons.

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