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To Assess the Knowledge Attitude and Practice of Perineal Tear Repair amongst the Doctors of Central India: A Cross Sectional Study

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Abstract: ***Background**: The knowledge of identification and classification of perineal tear has become extremely vital among the medical fraternity for the correct practices as this is becoming an alarming situation due to its accelerating frequency and magnitude of complications it accompanies if not managed timely. Therefore this study aims to identify the knowledge among the doctors as previous foreign studies have shown scarcity regarding the same and none of such studies have been done in Indian settings. **Materials and Methods**: Present study is a cross sectional study conducted among 500 doctors who have attended AICOG 2022 conference through a structured questionnaire. **Results**: results have shown that there is a deficiency in understanding the anatomy of perineal floor, many still uses traditional way of repair, and most of them have accepted their lack of confidence in repairing because of their unsatisfactorily and unsupervised training. **Conclusion**: There is a need for standardised protocol and training for better management of this extremely morbid condition to decrease the pain and sufferings of the women so that they feel safe and supportedas in our society, there's been always a taboo to discuss openly about these perineal problems.*

Keywords: perineal tear, knowledge, attitude, practice, AICOG 2022, episiotomy anatomy, sultans classification, perineal tear repair, IAS, EAS, quality of training

1. Introduction

Perinealtear is an extremely common though devastating complication of a vaginal delivery associated with high postnatal morbidity. It can occur either spontaneously or iatrogenically. [1] [2] [3]More than 53 - 89% of women will experience some form of perineal laceration at the time of delivery [1] [3] affecting 30 - 40% of the primigravidas. [4]Of these lacerations, 60 - 70% will require suturing [5]

Most lacerations will not require any repair, will heal by itself but major lacerations will require primary repair and despite proper repair can lead to consequences such as sexual dysfunction and anal incontinence. [6]

The outcomes of these perineal tears depends on the diagnosis and the repair technique used. A careful examination of the perineum, which includes the rectal examination (in case of deep tear) needs to be performed prior to the suturing. An early detection of perineal tears leads to early management and improves the outcome with minimal to no future complications.

Previous studies have concluded deficits in knowledge of perineal floor anatomy and its management among the health care workers. [7] Study conducted by Fernando et al in 2002 in united kingdom found that 33% of obstetric consultants and 22% of trainees incorrectly classified the degree of injury. [8]None of the study has been conducted in Indian settings which emphasizes the need for this study to identify the magnitude of problem and further training required among the health care workers.

2. Methods

- *Study design*: Cross Sectional Study
- *Study place:* Data is collected randomly from 500 gynaecologists who has attended the conference of All India Conference of Obstetrics and Gynaecology (AICOG) 2022 at INDORE

Structured questionnaire were designed to assess the knowledge regarding classification, diagnosis and repair of perineal tear and this also assess the satisfaction of the procedure being performed.

The data from the customized proforma was transferred to the Microsoft Excel for analysis. The final data was presented in the form of tables and graphs.

3. Results

1) Respondent Details

a) Professional designation

Among the 500 gynaecologists who have participated in the study, 70 (14%) were *Residents,* 10 (2%) were medical officers at District hospitals and 40 (8%) were consultants at District hospitals, 140 (28%) were consultants at Tertiary

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hospitals, 200 (40%) were private practitioners and 40 (8%) were specialists.

b) Years of Experience

Gynaecologists who had an experience of <5 years were 280 (56%), 5 - 10years were 160 (32%) and of >10years were 60 (12%).

2) Result from Knowledge Based Questionnaire

a) Muscles cut while performing an episiotomy

When asked about the anatomy of perineal floor i. e. the muscles which are cut during an episiotomy, only 190 **(38%) have answered to be bulbospongiosus and superficial tranverseperinei**, 70 (14%) bulbospongiosus, 60 (12%) bulbospongiosus and bulbocavernosus, 50 (10%) considered superficial and deep tranverseperinei while 130 (26%) considered levatorani is also involved along with bulbospongiosus and superficial tranverseperinei.

b) Classification of perineal tear according to Sultans Classification

When asked regarding the knowledge of perineal tear classification which was based on the latest classification system of Sultan's, here are the results:

Table 1: Classification of perineal tear according to Sultans Classification

Type of injury	2nd degree	3rd Degree	3a	3b	3c	4th degree	Don't know
EAS torn partially (<50% thickness)	60 (12%)	50 (10%)	**360 (72%)**	10 (2%)	10 (2%)	0	10 (2%)
IAS exposed but not torn	20 (4%)	90 (18%)	60 (12%)	**250 (50%)**	80 (16%)	0	20 (4%)
EAS exposed only	**240 (48%)**	150 (30%)	70 (14%)	20 (4%)	10 (2%)	0	10 (2%)
EAS torn completely (full thickness)	0	50 (10%)	20 (4%)	**310 (62%)**	100 (20%)	20 (4%)	0
IAS torn	10 (2%)	30 (6%)	40 (8%)	20 (4%)	**350 (70%)**	50 (10%)	0
Rectal mucosa and sphincter torn	0	10 (2%)	0	30 (6%)	0	**450 (90%)**	10 (2%)

3) Result from Attitude Based Questionnaire

a) When do you routinely perform rectal examination?

Table 2: Timing of performing rectal examination

Timing of performing rectal examination	Number	Percentage
Before suturing	130	26%
After suturing	300	60%
Only if a third degree tear is suspected	70	14%
Total	500	100%

b) Do you routinely try to identify Internal sphincter?

Table 3: Practice of routinely identifying IAS

Routinely identify IAS	Number	Percentage
YES	162	32.4%
NO	280	56%
Not seen before	58	11.6%
Total	500	100%

c) If torn, do u repair IAS separately?

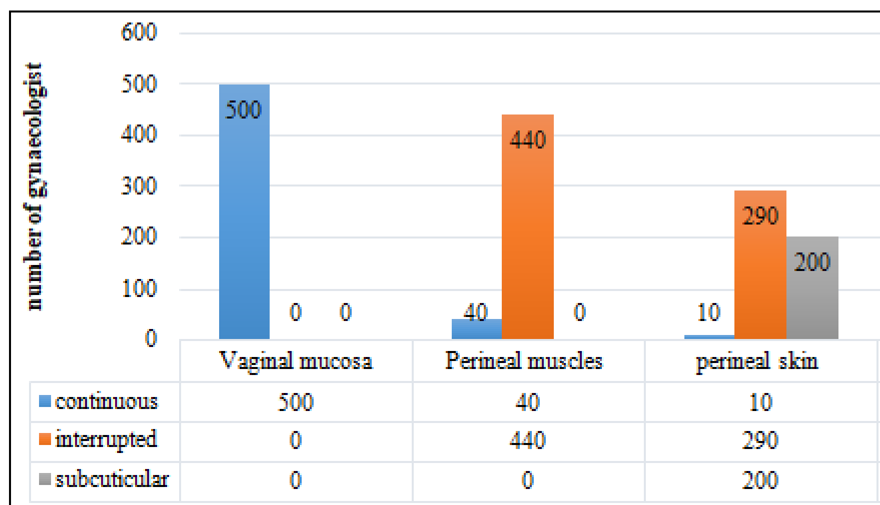
Table 4: Technique of repairing IAS

IAS repair	Number	Percentage
Yes, separately	355	71%
No, together with EAS	45	9%
Don't know	100	20%
Total	500	100%

4) Result from practice based questionnaire

a) Techniques of episiotomy repair

*100% gynaecologists perform mediolateral episiotomies



	Vaginal mucosa	Perineal muscles	perineal skin
continuous	500	40	10
interrupted	0	440	290
subcuticular	0	0	200

Graph 1: Technique of episiotomy repair

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b) Technique used to repair EAS when completely torn
Majority of doctors use end to end mattress sutures i. e.68% (340) while 22% (110) use end to end figure of 8 sutures and only 10% (50) use overlap technique while repairing EAS.

Table 5: Technique used to repair EAS when completely torn

Repairing technique for EAS	Number	Percentage
end to end mattress	340	68%
end to end figure of 8	110	22%
Overlap sutures	50	10%
Total	500	100%

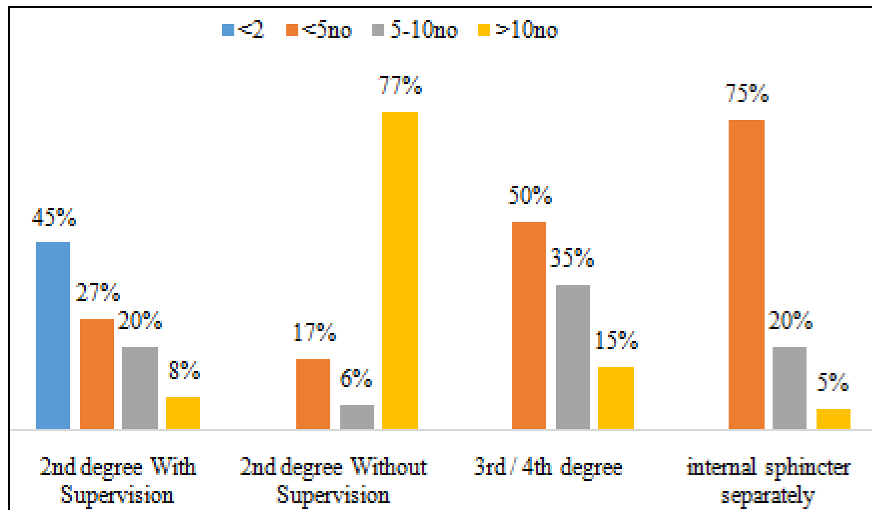
c) Suture material used while repairing anal sphincters

Table 6: Suture material used while repairing anal sphincters

Suture material	Number	Percentage%
Vicryl	295	59
Dexon	0	0
PDS	160	32
Catgut	45	9
Total	500	100%

5) Results Based on Quality of Training

a) Total perineal tears / episiotomies repaired



Graph 2: Total perinealtears / episiotomies repaired

b) Quality of training at the time of 1st episiotomy / tear repair

Table 7: Quality of training at the time of 1st episiotomy/ tear repair

Quality of training	1st unsupervised episiotomy/ 2nd degree repair (%)	1st 3rd/4th degree repair (%)
Excellent	4%	16%
Good	**51%**	11%
Could be better	36%	58 %
poor	9%	15%

4. Discussion

The present study aimed to establish, if the doctors of Central India have adequate knowledge, attitude and practices regarding classification of perineal tear and assess the consistency and level of satisfaction among them in perineal tear management. Therefore this study provide insight into some the practices and the level of knowledge and training among the gynaecologist practicing in central India, and probably the best way to study is to organise a survey in All India conference where gynaecologist from different areas have participated.

a) Respondent Details
In our study, we surveyed 500 gynaecologists where majority of them were either private practitioners (40%) or consultants in tertiary hospitals (28%).

Among them majority, i. e.56% have an experience of <5years.

b) Result from knowledge based Questionnaire
When questioned about the anatomy of perineal floor, we have seen major variations in the responses. Only 38% have correctly identified the muscles cut in episiotomy and the remaining 62% were not able to identify the correct muscles. Among them, majority i. e.26% have wrongly identified as Levatorani. The result is comparable with the study done **by AH Sultan [9]where More than half the doctors and midwives who named the muscles that were usually cut during an uncomplicated episiotomy wrongly named the levatorani.**

43.6% have correctly classified the degree of classification, but rest of them i. e.56.4% have incorrectly classified in which majority had difficulty in classifying subgrades of 3rd degree i. e.3a, 3b and 3cwhere EAS and IAS are involved. **In a study examining the knowledge regarding sphincter injuries in the United Kingdom by Fernando et al in 2002, the authors found that 33% of obstetrical consultants and 22% of trainees incorrectly classified the degree of injury. [8]**

The results are suggesting that there is a deficiency in understanding the anatomy of perineal floor.

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c) Result from Attitude based Questionnaire

When asked about the importance of performing rectal examination while repairing perineal tear, only 26% perform before suturing which is actually a correct practice which everyone should do in order to identify Obstetric anal sphincter injuries OASIS. While majority i. e.60% perform after suturing while only 14% perform when 3rd degree tears are suspected. In addition to this, we should routinely try to identify IAS. Based on our study only 32.4% practice this whereas 60% of doctors does not while the remaining 11.4% have not seen IAS before. Because of this wrong practice, most of the 3rd and 4th degree tears go unnoticed at the time of delivery which later complicates.

As far as the technique of repairing IAS is considered 71% of the doctors repair it separately from EAS which is appreciable. This is evidenced in a study done by **Parks [10]where he used a technique of identifying the internal anal sphincter which, if torn, is repaired as a separate layer. Using this technique the authors found a significant reduction in anal incontinence (to 8%), which can be compared with 41%, seen in a previous study where the end - to - end technique was employed.**

d) Result from Practice based Questionnaire

100% gynaecologist perform mediolateral episiotomies in which 100% sutured vaginal mucosa in a continuous fashion, 88% sutured perineal muscles in interrupted fashion whereas 12% in continuous fashion. For perineal skin, 40% have adopted subcuticular sutures which is cosmetically superior while 58% still considered interrupted mattress sutures. In a study done by **Kettle C in 2012 [11] to assess the effects of continuous versus interrupted absorbable sutures continuous suture techniques compared with interrupted sutures for perineal closure (all layers or perineal skin only) are associated with less pain for up to 10 days' postpartum (risk ratio (RR) 0.76; 95% confidence interval (CI). There was an overall reduction in analgesia use and also a reduction in suture removal.**

In our study, for EAS repair, majority (68%) consider end to end mattress sutures to be better than end to end figure of 8 sutures (22%) while 10% still practice overlap sutures. **In a study by Fernando et al, in 2002, Significant variation of preferred techniques for repair was shown, with 47.8% of consultants preferring end - to - end repair compared with 50.1% of consultants preferring the overlap technique (*P*<.001). [8]**

The suture material used for repairing anal sphincters were 32% start using PDS while 59% still considers vicryl to be better and 9% still uses catgut. **There is good evidence from randomised trials that synthetic materials such as *Vicryl or Polyglycolic acid (Dexon)* are preferable to catgut for repair of the perineumas shown in study done by Kettle C [12].**

e) Results Based on Quality of Training

Only 9% among 500 doctors have received adequate training of repairing 2nd degree tears under supervision i. e. >10 whereas majority 45% have done only 1or 2 repair under supervision. Therefore only 55% consider their training to be adequate rest 45% were not satisfied from their training. When compared with 77% doctors who have performed >10 2nd degree tear repair, only 15% have repaired >10 severe perineal tear repair so far i.e. they have confidence in repairing OASIS. **Only 27% consider their training to be adequate in repairing severe tears while rest 73% were not satisfied from their training. This data cannot be overlooked and requires further training among the staff.**

In a study by **Fernando et al**, 64% of consultants and trainees felt that their training in the management of OASIS was unsatisfactory.

In an Australian study examining perceptions of doctors and midwives regarding their practice and management of the perineum in preventing perineal trauma by **East et al** [13] only 77% of doctors reported that they were confident in the diagnosis and management of OASIS, despite having been trained in diagnosing OASIS. However, **Zimmo et al [14]** in their study in Palestine in 2017 demonstrated significant improvement in the knowledge after expert training, emphasizing the value of quality training.

5. Conclusion

The major variations which were seen in the study:

- Naming the muscles which were actually cut while performing the routine mediolateral episiotomy (only 38% have identified it correctly). Most common wrongly identified muscle was Levatorani.
- Classification of perineal tear according to Sultan's classification (56.4% have wrongly classified). Major variations were seen in classifying subgrades of 3rd degree perineal tears.
- Techniques used for the repair of external and internal anal sphincters (68% overlap 22% fig. of 8) and suture material (59% vicryl 32% PDS 9%catgut)
- Majority of them have lack of knowledge regarding identifying and repairing of IAS.
- Majority of them have unsatisfactorily training regarding perineal tear repair with a very less supervised repair (58% thinks their training could be better)

From our study, we conclude that although conducting an episiotomy and repair of perineal tear is practiced frequently among doctors all over India but knowledge of perineal floor anatomy, identifying anal sphincters, classifying perineal tear according to Sultans classification and correct repairing techniques were lacking among them which needs to be emphasized in view of the alarming increase in the incidence of perineal tears and its complications.

Therefore there should be a standardised protocol for the management of perineal tears and there is a need of training for all doctors as well as nursing staff practicing vaginal deliveries and I would recommend further such studies at different levels to identify the gaps and the effect of training.

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Declarations

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References

[1] Ugwu EO, Iferikigwe ES, Obi SN, Eleje GU, Ozumba BC. Effectiveness of antenatal perineal massage in reducing perineal trauma and post - partum morbidities: A randomized controlled trial. J ObstetGynaecol Res.2018 Jul; 44 (7): 1252 - 1258

[2] Vieira F, Guimarães JV, Souza MCS, Sousa PML, Santos RF, Cavalcante AMRZ. Scientific evidence on perineal trauma during labor: Integrative review. Eur J ObstetGynecolReprod Biol.2018 Apr; 223: 18 - 25.

[3] Goh R, Goh D, Ellepola H. Perineal tears - A review. Aust J Gen Pract.2018 Jan - Feb; 47 (1 - 2): 35 - 38.

[4] Samuelsson E, Ladfors L, Lindblom BG, Hagberg H. A prospective observational study on tears during vaginal delivery: occurrences andrisk factors. ActaObstetGynecol Scand.2002; 81 (1): 44–9.

[5] Committee on Practice Bulletins - Obstetrics. ACOG Practice Bulletin No.198: Prevention and Management of Obstetric Lacerations at Vaginal Delivery. Obstet Gynecol.2018 Sep; 132 (3): e87 - e102.

[6] Edqvist M, Hildingsson I, Mollberg M, Lundgren I, Lindgren H. Midwives' Management during the second stage of labor in relation to second - degree tears - an experimental study. Birth.2017; 44 (1): 86–94.

[7] TC Dudding, CJ Vaizey, MA. Kamm Obstetric anal sphincter injury: incidence, risk factors, and management Ann Surg, 247 (2008), pp.224 - 237

[8] RJ Fernando, AH Sultan, S Radley, PW Jones, RB. Johanson Management of obstetric anal sphincter injury: a systematic review & national practice survey BMC Health Serv Res, 2 (2002), p.9

[9] A. H. Sultan, M. A. Kamm& C. N. Hudson (1995) Obstetric perineal trauma: An audit of training, Journal of Obstetrics and Gynaecology, 15: 1, 19 - 23, DOI: 10.3109/01443619509007724

[10] Parks AC, McPartlin JF: Late repair of injuries of the anal sphincter. Proceedings of The Royal Society of Medicine.1971, 64: 1187 - 1189.

[11] Kettle C, Johanson RB: Absorbable synthetic versus catgut suture material for perineal repair (Cochrane Review). In: The Cochrane Library, Issue 4, Oxford: Update Software.2001

[12] Kettle C, Dowswell T, Ismail KM. Continuous and interrupted suturing techniques for repair of episiotomy or second - degree tears. Cochrane Database Syst Rev.2012 Nov 14; 11 (11): CD000947. doi: 10.1002/14651858. CD000947. pub3. PMID: 23152204; PMCID: PMC7045987.

[13] CE East, R Lau, MA. Biro Midwives' and doctors' perceptions of their preparation for and practice in managing the perineum in the second stage of labour: a cross - sectional survey Midwifery, 31 (2015), pp.122 - 131

[14] K Zimmo, K Laine, Å Vikanes, et al. Diagnosis and repair of perineal injuries: knowledge before and after expert training - a multicentre observational study among Palestinian physicians and midwives.

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