

## WHAT ARE THE CLINICAL FACTORS ASSOCIATED WITH ATTENDANCE AT A MULTIDISCIPLINARY PERINEAL CLINIC AMONG PATIENTS WITH OBSTETRICAL ANAL SPHINCTER INJURIES?

### Hypothesis / aims of study

Obstetrical trauma during childbirth is common (1) and has been identified as a risk factor for development of pelvic floor dysfunction (2). In order to minimize the impact of obstetrical anal sphincter injuries, women may be referred to a dedicated perineal clinic for the management of symptoms (3).

At our institution, a perineal clinic is run within the Urogynecology division. Early multidisciplinary intervention is designed to prevent long-term dysfunction such as chronic perineal pain, sexual dysfunction and urinary and fecal incontinence. The clinic is led by a physiotherapist, a family physician and a nurse continence advisor. Urogynecologists and a colorectal surgeon are available for consultation as needed. Despite the convenience of such a multidisciplinary clinic, over the past three years, 37% of women chose not to attend.

The aim of this study is to investigate the clinical factors associated with attendance at a multidisciplinary perineal clinic among patients with anal sphincter injuries. Information from this study will guide changes to facilitate greater attendance at the multidisciplinary perineal clinic and help guide others who are interested in developing a similar clinic.

### Study design, materials and methods

Our study was a retrospective chart review. All patients who were referred to the multidisciplinary perineal clinic at our tertiary care hospital, with a third or a fourth degree tear following a vaginal delivery, between October 2011 (opening of the clinic) and November 2014, were included in the study. Patients were excluded if they were currently pregnant, suffered a 2<sup>nd</sup> degree tear or had significant missing data from their charts. Women were identified from the Perineal Clinic Referral Forms stored in the clinic. Data were collected from the perineal clinic charts including the Delivery Record, Perineal Clinic Referral Form, Perineal Assessment Form and the Perineal Clinic History Questionnaire that the patients completed prior to their first appointment.

Data management and analysis was carried out using SPSS analytical software. Analyses compared the presence or absence of independent variables between women who attended and did not attend the clinic (the outcome variable). The independent variables studied were:

#### Maternal characteristics

- age
- nulliparity
- obesity
- smoking habit

#### Pregnancy complications

- pregnancy induced hypertension
- gestational diabetes
- postterm pregnancy

#### Delivery factors

- perineal tear
- episiotomy
- induction of labor
- epidural
- pushing time
- instrumentation
- shoulder dystocia

#### Infant characteristics

- gestational age at delivery
- birth weight
- Apgar at 1 min  $\leq$  5
- Apgar at 5 min  $\leq$  5
- need for resuscitation

#### Post-partum complications

- post-partum haemorrhage
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Preliminary statistical testing was done using chi-squared test (for 2x2 tables), and t-test for normally distributed continuous variables or Mann-Whitney test for non-parametric variables. This study had a 80% power to detect a between-group difference of 12% for categorical variables ( $\alpha= 0.05$ ).

## Results

245 patients with obstetrical anal sphincter injuries were referred to the clinic. 24 patients were excluded. Analysis was performed on 221 patients of whom 82 did not attend the clinic.

	Attending n= 139	Not attending n= 82	p value
Maternal characteristics			
Age	30 SD 4	29 SD 5	0.012
Nulliparity	105 (76%)	63 (77%)	0.83
Obesity	8 (6%)	5 (6%)	0.92
Smoker	5 (4%)	4 (5%)	0.64
Pregnancy complications			
Pregnancy induced HTN	9 (7%)	4 (5%)	0.63
Gestational diabetes	13 (9%)	9 (11%)	0.70
Postterm pregnancy	15 (11%)	15 (18%)	0.12
Delivery factors			
Tear			
3 <sup>rd</sup> degree	118 (85%)	70 (85 %)	0.92
4 <sup>th</sup> degree	21 (15%)	12 (15%)	
Episiotomy	47 (34%)	20 (24%)	0.13
Induction of labor	55 (40%)	36 (44%)	0.56
Epidural	94 (68%)	72 (88%)	0.001
Pushing time (min)	63 IQR 24-143	100 IQR 41-158	0.06
Instrumentation	69 (50%)	49 (60%)	0.15
Shoulder dystocia	12 (9%)	9 (11%)	0.57
Infant characteristics			
GA at delivery	39 <sup>5/7</sup> IQR 38 <sup>6/7</sup> -40 <sup>3/7</sup>	39 <sup>4/7</sup> IQR 39 <sup>0/7</sup> -40 <sup>4/7</sup>	0.59
Birth weight (g)	3403 SD 482	3360 SD 478	0.52
Apgar 1 min ≤ 5	17 (12%)	7 (9%)	0.38
Apgar 5 min ≤ 5	0 (0%)	3 (2%)	0.18
Need for resuscitation			
Bag/mask	13 (10%)	5 (6%)	0.33
ET tube	2 (2%)	3 (4%)	0.32
Post-partum complications			
Hemorrhage	17 (12%)	15 (18%)	0.216

\* Chi-square test for categorical variables and t test or Mann-Whitney test for continuous variables as appropriate

Patient age and use of epidural were found to be statistically different between the two groups. The non-attendees were younger and more likely to have had an epidural during labor.

## Interpretation of results

Most clinical factors are not associated with perineal clinic attendance among patients with obstetrical anal sphincter injuries. However, women who did not attend the clinic were statistically younger than those who attended, although this difference is unlikely to be clinically significant. Epidural use in labor was less common among women that attended the clinic. We surmise that women who feel pain during labor and the immediate post-partum period are more likely to be aware of their perineal injury and its repair, and therefore, perceive the obstetrical anal sphincter injury as a concern. In addition, women who manage to get through labor without an epidural are usually highly motivated and invested in their health which would explain that they are more likely to get involved in a perineal clinic program.

## Concluding message

Our research showed that there were few clinical factors associated with the perineal clinic attendance. It is likely that attendance depends of other socio-economic factors such as childcare, cultural background, transportation and education. These variables were not readily available to us but we intend to explore these issues with further research.

## References

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## Disclosures

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