#89: Factors influencing rehabilitation among patients with obstetrical anal sphincter injury. A multidisciplinary approach.

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Introduction

Obstetric Anal Sphincter Injury (OASI) has a major burden on patients quality of life due to its important associated symptoms. Even in patients correctly diagnosed intrapartum and adequate repair, 40% will refer anal incontinence (1). These patients require follow-up in search for possible pelvic floor dysfunction and early intervention (2)

Aim

The primary aim of the current study was to determine which factors are more frequent among patients with an obstetrical anal sphincter injury (OASI) that require rehabilitation.

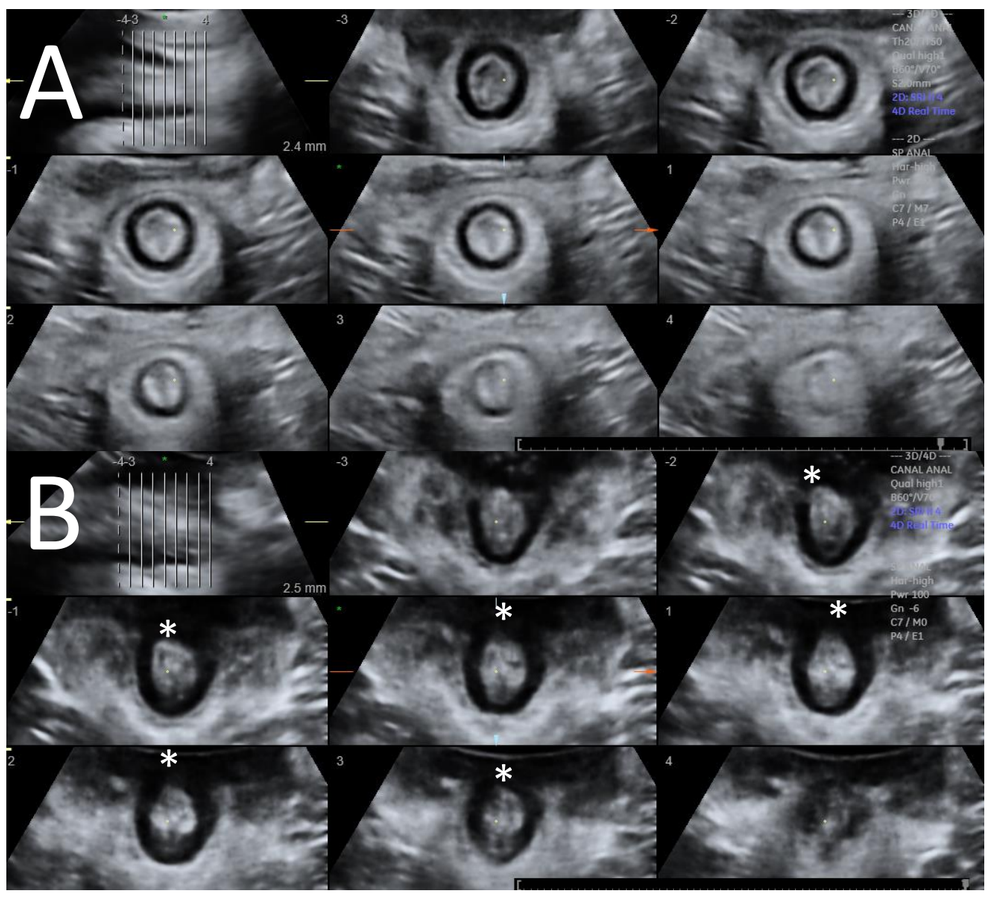
Methods and Materials

This was a retrospective observational study which included women with an OASI that were assessed at a single center during January 2015 and December 2017. All women sustaining an OASI at the author's institution were followed up at 3 to 4 months postpartum by a multidisciplinary team formed by a urogynaecologist, two rehabilitation specialists and a specialized nurse in urogynaecology. Patients were followed up by either rehabilitation specialist depending on the referral area they were assigned to. The patients of this study are only those seen by one of the rehabilitation specialists. All patients underwent a urogynaecological history, a clinical examination and a 4D translabial ultrasound (TLUS). All women were administered questionnaires validated in Spanish to assess urinary and anal incontinence (Incontinence Severity Index (ISI) and Wexner incontinence scale. TLUS was performed in dorsal lithotomy and after voiding to assess levator ani muscle trauma, avulsion and hiatal area, urethral hypermobility and anal sphincter repair/defects. Significant anal sphincter defect was considered when at least 4 out 6 slices was present. (3)

Decision to refer a patient for rehabilitation was established by the multidisciplinary team based on patient symptoms and clinical findings.

Data was collected from local electronic database. Variables recorded are listed in table 1 and 2.

Fig 1. Transperineal ultrasound of the anal canal. In image A there is a normal sphincter with no lesion. In image B there there is a defect in the anterior portion of the external anal sphincter (*).



		Rehabilitation		OR (95% CI)	p value
		No	Yes		
Length of second stage of labour (mins)[a]	passive phase	64.32 (60.82)	78.84 (67.48)		0.532
	active phase	53.41 (33.07)	62.42 (36.72)		0.324
Forceps delivery[b]	No	21/27 (77.8%)	6/27 (22.2%)		
	Yes	34/49 (69.4%)	15/49 (30.9%)	1.54 (0.52-4.6)	0.593
Perineal tear degree[b]	3A/3B	47/65 (72.3%)	18/65 (27.7%)		
	3C/4	7/10 (70%)	3/10 (30%)	1.12 (0.261-4.81)	1
Obesity (BMI>30kg/m2) [b]	No	33/42 (78.6%)	9/42 (21.4%)		
	Yes	20/30 (66.7%)	10/30 (33.3%)	1.83 (0.64-5.28)	0.289
Previous vaginal delivery[b]	No	46/64 (71.9%)	18/64 (28.1%)		
	Yes	8/11 (72.7%)	3/11 (27.3%)	0.96 (0.23-4.02)	1
Episiotomy[b]	No	15/18 (83.3%)	3/18 (16.7%)		
	Yes	38/56 (67.9%)	18/56 (32.1%)	2.37 (0.61-9.23)	0.245
Repair technique[b]	end to end	33/46 (71.7%)	13/46 (28.3)		
	overlap	16/20 (80%)	4/20 (20%)	0.64 (0.18-2.26)	0.555
Birthweight >4kg[b]	No	50/70 (71.4%)	20/70 (28.6%)		
	Yes	4/5 (80%)	1/5 (20%)	0.63 (0.07-5.94)	1

Table 1: Association between rehabilitation among patients with anal sphincter tears and obstetrical data. [a] Data analyzed using t-student test. Data expressed as mean (SD). [b] Data analyzed using Fish exact test. Data expressed as OR (95% CI)

		Rehabilitation		OR (95% CI)	p value
		No	Yes		
Urinary incontinence[b]	No	46/58 (79.3%)	12/58 (20.7%)		
	Yes	9/18 (50%)	9/18 (50%)	3.83 (1.25-11.76)	0.032
Anal incontinence[b]	No	45/59 (76.3%)	14/59 (23.7%)		
	Yes	10/17 (58.8%)	7/17 (41.2%)	2.25 (0.72-7.01)	0.218
Fecal urgency [b]	No	35/47 (74.5%)	12/47 (25.5%)		
	Yes	12/19 (63.2%)	7/19 (36.9%)	1.7 (0.54-5.32)	0.381
Fecal urgency warning time[b]	<15 mins	33/47	14/47		
	>15 mins	12/17	5/17	0.98 (0.29-3.31)	1
Wexner incontinence score [a]		0.89 (2.03)	2.33 (3.99)		0.127
Incontinence severity index [a]		0.76 (1.86)	1.52 (2.34)		0.142
Hiatal area [a]		22.33 (7.57)	23.71 (6.66)		0.47
Bladder neck descent [a]		21.63 (33.74)	21.62 (8.56)		0.999
Sig. anal sphincter defect[b]	No	41/53 (77.4%)	12/53 (22.6%)		
	Yes	6/15 (40%)	9/15 (60%)	5.13 (1.52-17.31)	**0.006**
Length (Nº slices) of the anal sphincter defect [a]		1.13 (1.66)	2.71 (1.68)		**0.001**
Avulsion[b]	No	36/52 (69.2%)	16/52 (30.8%)		
	Yes	8/13 (61.5%)	5/13 (38.5%)	1.41 (0.4-4.97)	0.742

Table 2: Association between rehabilitation among patients with anal sphincter tears and patient symptoms and ultrasound findings. a Data analyzed using t-student test. Data expressed as mean (SD).b Data analyzed using Fish exact test. Data expressed as OR (95% CI)

Interpretation of results

We found in our population study, that patients which have sustained an OASI on short term follow-up have frequently anorectal and urinary symptoms despite correct intrapartum diagnosis and primary repair. Rehabilitation was required in over a quarter of patients. Those factors that seem to influence rehabilitation are urinary incontinence and the extent of anal sphincter defects on univariate analysis. This data must be interpreted with caution, since it may well be the combined findings that may warrant a patient to receive rehabilitation.

Results

A total of 77 women were seen at the perineal clinic with the cited rehabilitation specialist during the inclusion period. Their mean age at delivery was 32 years (SD 5, 19-45). 85.5% (65/76) were primiparous. 37.5% (30/73) were obese. Mean completed gestational weeks at delivery was 39. Urinary incontinence was referred in 23.7% (18/76) of patients and anal incontinence in 15.8%(12/76). Rehabilitation was prescribed in 27.6% (21/76) of patients.

Conclusions

The association of urinary incontinence and the extent of anal sphincter defects are important findings in patients that will require rehabilitation. Signicant anal sphincter defects on ultrasound is associated with the need of a patient with OASI to undergo rehabilitation with an OR of 5.13 (CI 1.52-17.31, p=0.006). Ultrasound should be performed in the workup of these patients by a multidisciplinary dedicated team .

References

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