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IS THERE ANY FACTOR FOR SYMPTOMS PERSISTENCE AT 6 MONTHS OF DELIVERY IN PATIENTS WITH OBSTETRIC ANAL SPHINCTER INJURIES (OASIS)?

Hypothesis / aims of study

OASIS occurs in about 1-3% of women after their first vaginal birth. The consequences include anal incontinence in 5% of women with extensive tears.

The objective of this study is to determine the existence of risk factors for persisting symptoms of anal incontinence, urinary incontinence and dyspareunia at 6 months after delivery in patients with OASIS.

Study design, materials and methods

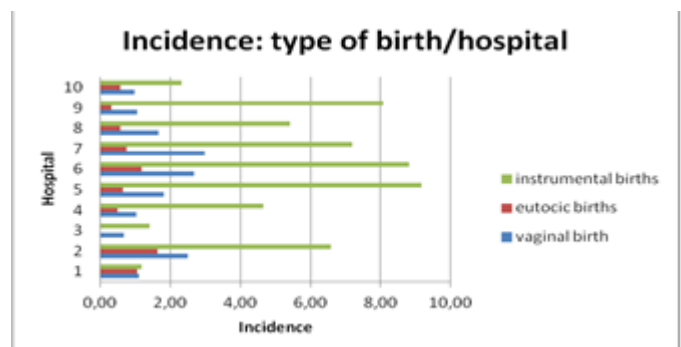
This is a multicentric, prospective study that includes 10 university hospitals in the province of Barcelona. We include all patients with OASIS diagnosed, treated intrapartum and followed- up during the study period.

Recruitment took place between January and June 2012 and monitoring finished in December 2012, to assess a 6 month follow-up in all patients. All OASIS were diagnosed and repaired following the ICS Intra and Postpartum Working Group recommendations.

We collected sociodemographic information, obstetric factors, delivery characteristics and OASIS data. During follow-up patients were asked for details of their bowel and bladder function completing ICIQ-SF and Wexner Faecal Continence Grading Scale questionnaires and a direct question about *de novo* dyspareunia, in the postpartum visit (average of 6 weeks) and at 6 months from delivery. We also carried out a physical examination.

Results:

Incidence	118/7726 (1.52%) 40/5962 (0.6%) Eutocic births 76/1764 (4.3%) Instrumental births	Vaginal delivery
IIIA	48/116 (41.38%)	
IIIB	57/116 (49.13%)	
IIIC	7/116 (6%)	
IV	3/116 (2.58%)	
Age	30.86 (17-42)	
Previous births at term	0.4 (0-2)	
Previous Urinary Incontinence	3/103 (2.91%)	
Previous anal Incontinence	2/101 (2%)	
BMI	25,6 (17.36-52.35)	
Ultrasound Percentile in 3 rd trimester	60,98 (8-100)	
Position of fetal head		
Direct Occiput Anterior (OA)	71/117 (60.68%)	
Left Occiput Anterior (LOA)	12/117 (10.25%)	
Right Occiput Anterior (ROA)	12/117 (10.25%)	
Left Occiput Transverse (LOT)	8/117 (6.83%)	
Right Occiput Transverse (ROT)	6/117 (5.13%)	
Direct Occiput Posterior (OP)	1/117 (0.85%)	
Left Occiput Posterior (LOP)	1/117 (0.85%)	
Right Occiput Posterior (ROP)		
Gestational weeks at delivery	39.61 (36-42)	
Type of birth		
Eutocic birth	40/117 (34.18%)	
Naegele Forceps	20/117 (29.05%)	
Kjelland Forceps	34/117 (17.09%)	
Vacuum	16/117 (13.67%)	
Thierry Spatulas	7/117 (6%)	



	Results at 6 month follow up
De Novo Urinary Incontinence (UI)	21/118 (17,8%)
De novo Anal Incontinence (AI)	19/118 (16,1%) Solid: 2/118 (1,7%) Liquid: 4/118 (3,4%) Flatus: 13/118 (11%)
De novo dyspareunia	19/118 (16,1%)

Causes of instrumental delivery	47/77 (61.03%)
Fetal Distress	17/77 (22.07%)
Shorten 2n stage of labour	13/77 (16.88%)
Rotation dystocia	
Birth weight (grams)	3429.31 (2240-4630)
Episiotomy	83 (70.94%)

	De novo UI	Mean	SD	p	De novo AI (flatus)	Mean	SD	p	De novo dyspareunia	Mean	SD	p
Age	Yes	32.43	4.59	0.14	Yes	33.77	3.19	0.00	Yes	29.79	5.22	0.34
	No	30.64	5.49	8	No	30.5	5.43	5	No	31.07	3.35	
BMI	Yes	26.11	5.05	0.33	Yes	24.17	3.05	0.14	Yes	25.27	4.5	0.75
	No	24.35	4.5	0	No	25.78	5.55		No	25.66	5.52	
Gestational weeks	Yes	40.19	1.16	0.02	Yes	39.77	1.53	0.7	Yes	39.84	0.96	0.3
	No	39.48	1.31		No	39.6	1.29		No	39.57	1.37	
Eco Percentile	Yes	66.5	23.15	0.30	Yes	57.67	23.02	0.6	Yes	64.94	19.95	0.38
	No	60.33	21.91	8	No	61.43	21.45		No	60.17	21.9	
Birth weight	Yes	3729.52	347.69	0.00	Yes	3571.1	402.9	0.2	Yes	3561.5	8	0.18
	No	3380.86	471.64		3	No	3411.5		481.2	No	3403.6	

	De novo UI	n	p	De novo AI (flatus)	n	p	De novo dyspareunia	n	p			
Foetal head position												
OA	Yes	13	0.7	Yes	8	0.8	Yes	16	0.08			
	No	58		No	63		No	55				
LOA	Yes	0		Yes	0		Yes	1				
	No	12		No	12		No	11				
ROA	Yes	4		Yes	1		Yes	1				
	No	8		No	11		No	11				
LOT	Yes	1		Yes	2		Yes	0				
	No	7		No	6		No	8				
ROT	Yes	2		Yes	1		Yes	0				
	No	4		No	5		No	6				
OP	Yes	1		Yes	1		Yes	0				
	No	5		No	5		No	6				
LOP	Yes	0		Yes	0		Yes	1				
	No	1		No	1		No	0				
ROP	Yes	0		Yes	0		Yes	0				
	No	1		No	1		No	1				
Type of birth												
Eutocic birth	Yes	7	0.77	Yes	5	0.83	Yes	7	0.31			
	No	33		No	35		No	33				
Naeglele Forceps	Yes	4		Yes	3		Yes	5				
	No	16		No	17		No	15				
Kjelland forceps	Yes	3		Yes	3		Yes	2				
	No	31		No	31		No	32				
Thierry's Spatulas	Yes	0		Yes	0		Yes	1				
	No	7		No	7		No	6				
Vacuum extraction	Yes	4		Yes	2		Yes	4				
	No	12		No	14		No	12				
Causes of instrumental delivery												
Foetal Distress	Yes	7		0.16	Yes		2	0.16		Yes	8	0.95
	No	40	No		45	No	39					
Shorten 2n stage of labour	Yes	4	Yes		4	Yes	2					
	No	13	No		13	No	15					
Rotation dystocia	Yes	2	Yes		2	Yes	2					
	No	11	No		11	No	11					
Tear degree												
IIIA	Yes	9	0.81	Yes	6	0.82	Yes	9	0.66			
	No	39		No	42		No	39				
IIIB	Yes	12		Yes	7		Yes	9				
	No	45		No	50		No	48				
IIIC	Yes	0		Yes	0		Yes	0				
	No	7		No	7		No	7				
IV	Yes	0		Yes	0		Yes	0				
	No	3		No	3		No	3				

Interpretation of results

The incidence of OASIS for vaginal delivery is 1.52%, increasing to 4.3% in instrumental births, and the most usual type of tear is IIIA and IIIB (90.51%). In these patients, the incidence of UI and AI is similar (17.8%-16.1%). That could possibly be justified by prenatal factors or the fact of a traumatic delivery added to the OASIS.

De novo UI at 6 months follow-up is not significantly associated with maternal age, BMI or percentile in 3rd trimester ultrasound. It is neither associated with degree of perineal tear, type of birth, foetal head position or the cause of instrumental usage. The presence of UI is significantly more prevalent in women with larger foetuses. In patients with flatus incontinence we do not find

any statistically significant difference in any of the studied items except in maternal age. Symptoms are more persistent in older women. In patients with *De novo* dyspareunia we cannot find statistically differences in any of the studied factors.

Concluding message

There are not concluding factors to predict or prevent persistence of symptoms at 6 months after OASIS except from maternal age for flatus incontinence and newborn weight for urinary incontinence. This could be explained by the low number of OASIS in this study. More extensive series would probably allow statistically significant differences to be found.

Disclosures

Funding: No funding or grant **Clinical Trial:** No **Subjects:** HUMAN **Ethics not Req'd:** Because this study is a description of our clinical practise **Helsinki:** Yes **Informed Consent:** No