

## UNDIAGNOSED ACUTE OBSTETRIC ANAL SPHINCTER INJURIES (OASIS) – AN OPPORTUNITY LOST?

### Hypothesis / aims of study

Anal sphincter defects identified by ultrasound some time after delivery were previously believed to be occult injuries (1). However recent work (2) has shown that these “occult” injuries were in fact missed injuries that could have been identified at the time of delivery by adequately trained clinicians. Furthermore it has been demonstrated that training of doctors and midwives in perineal anatomy, performing and repairing perineal tears and identification of OASIS is suboptimal (3). This has serious clinical and medicolegal implications. The aim of this study was to identify a cohort of women with missed OASIS and analyze their demographics, presentations, sphincter defects, management and outcome.

### Study design, materials and methods

All women who had been referred to the perineal clinic between 2002 and 2006 and found to have sonographic evidence of OASIS without a previous clinical diagnosis of OASIS at delivery were included for analysis. Anorectal manometry (Stryker air-filled system) and endoanal ultrasound (B and K Medical 10MHz rotating endoprobe) was performed in all women. As part of our routine practice patients completed the validated Manchester Health Questionnaire that allows for scoring the presence of defecatory problems and its effect on quality of life. Women who had evidence of a sonographic anal sphincter defect in the absence of a documented diagnosis of a 3<sup>rd</sup> or 4<sup>th</sup> degree tear at delivery were analyzed for their demographics, presentations, modalities of management and outcome.

### Results

Twenty one women with missed OASIS were identified with a median age of 33 (range 21 to 42) and a median parity of 1 (range 1-3 years). The time between presentation and the index injury was a median of 4 months (range 0.5-180 months) The presenting symptoms, the type of defect on endoanal ultrasound, anal manometry, their management and outcome are presented below:

PRESENTING SYMPTOM	NUMBER OF PATIENTS
Anal incontinence	14
Wound breakdown	5
Fecal urgency	1
Perineal discomfort	1

TYPE OF DEFECT on endoanal ultrasound	NUMBER OF PATIENTS
External Anal Sphincter defect only	8
Internal and External Anal Sphincter defect	13

MANAGEMENT	NUMBER OF PATIENTS
Pelvic floor exercises and Biofeedback	15
Secondary sphincter repair	9
Tertiary referral to us for investigations only	3
Resuturing of missed third degree tear 6 days postnatally	1

OUTCOME	NUMBER OF PATIENTS
Discharged	18
Discharged to referring hospitals	3

Of the 15 patients referred for biofeedback, all were discharged as there was symptomatic improvement despite residual symptoms of urgency and/ or occasional incontinence after biofeedback. These patients were advised to return if their symptoms returned or became bothersome. One patient showed no improvement and is currently pregnant and wishes to be delivered by cesarean section. All these women were advised to return to the perineal clinic during any subsequent pregnancy for further evaluation and counselling regarding mode of delivery. Of the 9 patients who had secondary sphincter repair, 8 patients reported improvement although some were still having difficulty with control of flatus. These women were advised to have a cesarean section for any subsequent pregnancies.

### Interpretation of Results

OASIS can have a devastating effect on a woman's physical and social wellbeing. If these tears are not identified at delivery, the women may present with fecal incontinence and undergo a secondary repair. In our study, the outcome of most secondary sphincter repairs were good at follow-up. However all repairs were done jointly by a colorectal surgeon and urogynecologist as most of the patients had a deficient perineum following the missed OASIS (cloacal defect) and needed reconstruction. Secondly, the follow up period was short (up to 3 months) and the number of women treated were small. In general, the outcome of primary repair at delivery is better than that obtained at secondary repair (63% vs <50%) and therefore it is imperative that doctors and midwives receive focused training to identify these injuries. Sixty two percent had injury to the internal anal sphincter that was missed at delivery. This is of considerable importance as it is almost impossible to repair adequately as a secondary procedure. In terms of litigation missed OASIS offer ample grounds for litigation and compensations at the higher scale throughout the United Kingdom as illustrated by the following cases:

*Farrer (AP) v Lothian Health Board [1999] ScotCS 93 (31 March 1999) damages of £50,000; Kelly v. Lenihan [2004] IEHC 427 (2 July 2004) damages of €255,500.*

The legal position is similar in other litigious jurisdictions as highlighted by the United States court case: *Combs v. Hahn, (1999) US Supreme Court of Appeals*, where damages were awarded even for future disability as the aftermath of the missed tear. Significantly the plaintiff was awarded damages for having to undergo another surgical 'risky' procedure to correct the original negligence.

Claims for clinical negligence are limited by the provisions of Section 11 (4) (a) of the Limitation Act 1980. Claims are subject to a limitation period of three years, which run from the date of the alleged negligent treatment. It is possible in some instances to bring claims outside the statutory limitation period of 3 years from the negligent act, pursuant to Section 11 (4) (b). The above extension depends on the date of knowledge of the claimant of the alleged negligent act being the cause of or contribution to her injury. Thus it is a reality that claims for missed tears can be brought years after the original injury due to the evidence offered by the advent of endoanal scans. The position is similar in all developed countries with a higher litigation scale of quantum of damages for inadequately sutured or misdiagnosed tears.

#### Concluding message

To maximise the chances of a good outcome, all OASIS should be diagnosed and repaired at delivery. More attention needs to be directed towards focused training of doctors and midwives and hands-on workshops have been shown to improve clinical practice. Women undergoing childbirth need assurance that the accoucher is adequately trained to identify and repair OASIS appropriately. It is incumbent upon the clinicians to be aware of their liability when OASIS are missed in the light of robust evidence offered by endoanal ultrasound scans.

#### References

1. Anal sphincter disruption during vaginal delivery. N Engl J Med (1993) 23;1905-11.
2. Occult anal sphincter injuries--myth or reality? BJOG (2006)113;195-200.
3. Obstetric perineal tears: an audit of training. J Obstet Gynaecol (1995) 15;19-23.

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<b><i>What were the subjects in the study?</i></b>	<b>HUMAN</b>
<b><i>Was this study approved by an ethics committee?</i></b>	<b>No</b>
<b><i>This study did not require ethics committee approval because</i></b>	<b>The assessment was part of routine clinical management</b>
<b><i>Was the Declaration of Helsinki followed?</i></b>	<b>Yes</b>
<b><i>Was informed consent obtained from the patients?</i></b>	<b>No</b>