

## SCIENCE OR MAGIC: ADVICE AFTER AN OASIS.

### Hypothesis / aims of study

Obstetric anal sphincter injuries (OASIS) cause significant maternal morbidity and have implications on future pregnancies. OASIS rates continue to increase, from 1.8% in 2000 to 5.9% in 2012 (1). Despite the increasing prevalence of OASIS, there is still a lack of robust evidence for the optimal mode of delivery in future pregnancies. A number of algorithms based on bowel symptoms, endoanal ultrasound and anal manometry have been proposed to guide future mode of delivery (2,3).

The objectives of this study were to assess the clinical value of the proposed diagnostic tools and the performance of different algorithms in counselling women about future mode of delivery after sustaining an OASIS.

### Study design, materials and methods

Prospective data were collected from a teaching hospital's perineal clinic over a 5-year period. Women undergoing endoanal ultrasound scan and anorectal manometry investigations were included in this study, which based on the current hospital protocol were all symptomatic 3a or any 3b, 3c or 4<sup>th</sup> degree OASIS. Bowel symptoms were assessed using the validated Pescatori anal incontinence questionnaire. Endoanal ultrasound evaluated external anal sphincter (EAS) and internal anal sphincter (IAS) defects. Sonographic sphincter defects of more than 30 degrees were considered significant. Manometry studies recorded maximum anal sphincter pressures at rest and during squeeze. A difference of less than 20mmHg between these two values was considered an abnormal result. We theoretically applied a number of different published management algorithms to our cohort, to determine their impact on recommended future mode of delivery.

### Results

Out of 1002 patients who were reviewed in the perineal clinic, 233 went on to have further investigations and were therefore included in this study. Out of the 233 women, 51 were symptomatic for anal incontinence, while 182 were asymptomatic. The results of the investigations in our cohort are summarised in figure 1.

One asymptomatic and five symptomatic patients were found to have isolated IAS defects without concomitant EAS defects. There were no patients who had a low resting pressure (<40mmHg) with a normal increment on squeeze (>20mmHg).

If symptoms alone were used to determine future mode of delivery, 51 out of 233 (21.9%) would be recommended caesarean section (CS). Table 1 presents the results for recommended CS using different investigations and combinations of them in proposed management algorithms.

Algorithm	Offered CS N (%)
Symptomatic	51 (22%)
External anal sphincter (EAS) defect	135 (58%)
EAS or IAS defect	141 (61%)
Incremental squeeze pressure <20mmHg	124 (53%)
Incremental squeeze pressure <20mmHg or resting pressure <40mmHg	124 (53%)
Symptomatic with EAS defect or low incremental squeeze pressure & asymptomatic with EAS defect and low incremental squeeze pressure	94 (40%)
EAS defect or low incremental squeeze pressure (Reference Mayday ?2)	190 (81%)
Symptomatic or EAS defect or low incremental squeeze pressure (Reference Imperial ?3)	198 (85%)

Table 1

### Interpretation of results

The presence of isolated IAS defects affected only 2.5% of patients and would have an impact in the management of only 2% of women. A low resting pressure had no impact on the management plans as all of those women also had low increase on squeeze and therefore would have already been identified as having abnormal manometry.

Different management algorithms resulted in very different recommended caesarean section (CS) rates. By applying proposed algorithms to our cohort we can see that the presence of symptoms has little impact on the recommended mode of delivery when abnormal endoanal ultrasound scan or manometry studies lead to recommendation for CS, changing the management plan in only 4% of the cases (85% vs 81%) (81% recommended caesarean in the asymptomatic group, vs 85% in the symptomatic group).

### Concluding message

The number of patients recommended to have CS after OASIS varies from 22% to 85% depending on the used management algorithm. The additional value of isolated IAS defect and low resting pressure is minimal. Prospective studies validating proposed algorithms are urgently required.

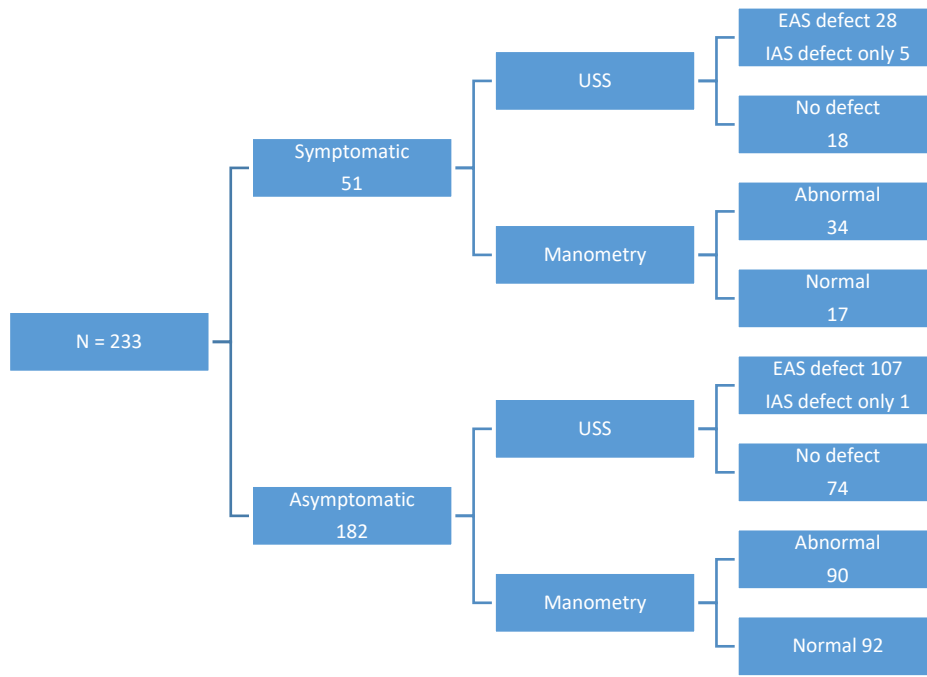


Figure 1

References

1. RCOG Green-top guideline No.29
2. International Urogynaecology Journal (2009) 20:1095-1101.
3. Eur J Obstet Gynecol Reprod Biol 2015;194:7-10

Disclosures

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