

## BOWEL AND BLADDER SYMPTOMS FOLLOWING A CLINICALLY SUSPECTED OBSTETRIC ANAL SPHINCTER INJURY.

### Hypothesis / aims of study

Obstetric anal sphincter injury (OASIS) complicates 11% of vaginal deliveries<sup>1</sup>, leading to anal symptoms in 10-50%<sup>2</sup>. Several factors are known to contribute to OASIS including episiotomy, forceps, and long second stage.

This study assesses the factors contributing to OASIS and the rate of both faecal and urinary symptoms.

### Study design, materials and methods

Between June 2008 and February 2012 all women from our Institution with a clinical diagnosis of obstetric anal sphincter injury were referred as per hospital protocol to a dedicated clinic three months post-delivery for assessment. A full history was taken with obstetric delivery factors and subsequent urinary and faecal symptomology recorded. All patients went on to have a three-dimensional anal endosonography (AES) performed. All data was collected prospectively. The prospectively collected data was assessed using Excel database, StatsDirect and GraphPad software.

### Results

A total of 456 post-partum women with clinically assessed suspected anal sphincter injury were assessed in the study period. Mean age of 31.4 years. 372 (81.6%) had a confirmed obstetric anal sphincter injury on AES. 351 (77.0%) were primiparous.

#### Obstetric Factors

The mean length of second stage was 93.5 minutes, with a mean baby head circumference of 34.69cm. 169 (37.1%) required an episiotomy, 144 (31.6%) required forceps delivery and 46 (10.1%) required a ventouse delivery.

Length of second stage of labour was significantly prolonged in those found to have OASIS on AES (99.6 minutes vs. 66.4 minutes,  $p < 0.005$ ). Assisted delivery rates were significantly higher in women found to have OASIS than those with no AES evidence of sphincter injury (41.4% vs. 16.7%,  $p < 0.0001$ ) as were rates of episiotomy or tears (40.3% vs. 22.6%,  $p < 0.005$ ) and forceps with a tear (36.3% vs. 10.7%,  $p < 0.0001$ ). Mean baby head circumference (34.68cm vs. 34.72cm) and induction rates (15.9% vs. 13.1%) were not significantly greater in those patients with OASIS or not.

#### Urinary Symptoms

Of the 456 women 58 (12.7%) complained of urinary urgency, 49 (10.7) had urinary urge incontinence, 23 (5.0%) had urinary frequency, 99 (21.7%) had urinary stress incontinence, 32 (7.0%) had a sensation of incomplete bladder emptying and 14 (3%) had voiding difficulties.

Urinary urge incontinence significantly higher in patients with OASIS compared to those with no AES proven injury (13.8% vs. 4.8%,  $p < 0.05$ ). There was no significant difference in the incidence of urinary urgency and the sensation of incomplete evacuation in those with or without AES proven OASIS.

#### Faecal Symptoms

Of the 456 women 120 (26.3%) had flatus incontinence, 8 (1.8%) had passive faecal incontinence, 11 (2.4%) had urge faecal incontinence, 27 (5.9%) had post defaecation soiling, 57 (12.5%) had constipation, 62 (13.6%) complained of difficulty defaecation, 72 (15.8%) had a sensation of incomplete evacuation and 8 (1.8%) had to digitate to aid evacuation of the rectum. Incontinence to flatus was significantly higher in patients with EAS proven OASIS (29.0% vs. 14.3%,  $p < 0.01$ ). There was no significant difference in the rates of passive faecal incontinence (1.61% vs. 2.38%), urge faecal incontinence (2.96% vs. 0%), post-defaecatory soiling (8.2% vs. 4.76%), constipation (11.8% vs. 16.7%), difficulty of evacuation (14.8% vs. 8.3%), straining (19.9% vs. 15.5%), the sensation of incomplete evacuation (15.1% vs. 19.1%) and rates of anal digitation (1.61% vs. 2.38%) in those with or without AES proven OASIS.

### Interpretation of results

Results from our Unit are comparable to published literature with a prolonged length of second stage of labour, instrumentation and tears or episiotomies being associated with AES confirmed obstetric anal sphincter injury. Over a third of the women with a clinically suspected OASIS will complain of bowel symptoms, either anal incontinence or difficult defaecation. Following a clinically suspected OASIS a quarter of women will complain of urinary symptoms indicating the severity of injury to the entire pelvic floor.

Symptoms of urinary urge incontinence and incontinence to flatus were significantly higher in patients with an anal sphincter injury confirmed on AES.

### Concluding message

This work supports previous published data demonstrating measurable risks for obstetric anal sphincter injury. Women experience both bowel and bladder symptoms following a suspected OASIS. Identifying these women will enable them to be directed to further investigations and treatment if necessary to prevent future deterioration in their bowel or bladder symptoms.

### References

1. Obstetric Anal Sphincter Injury: Incidence, Risk Factors and Management. Dudding T, Vaizey C, Kamm M. *Annals of Surgery*, 2008 Vol 247/2 p224-237.
2. Faecal Incontinence in Adults. Madoff R, Parker M, Varma M et al. *The Lancet*. 2004 Vol 364/9434 p621-632

Disclosures

**Funding:** Nil **Clinical Trial:** No **Subjects:** HUMAN **Ethics not Req'd:** Review of clinical data collected as part of routine clinical practise. **Helsinki:** Yes **Informed Consent:** No