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# OASIS (OBSTETRIC ANAL SPHINCTER INJURIES) AND URINARY INCONTINENCE. IS THERE A RELATIONSHIP?

Hypothesis / aims of study

Recognised OASIS and urinary incontinence have been reported in 19% (1) and 23% (2) of primiparous women respectively. However there is paucity of data regarding the true prevalence of urinary incontinence in women with OASIS. There are no published studies that have used a validated questionnaire and comparable controls. There is also very limited data regarding the type of urinary incontinence (urge or stress) in women with OASIS. The aim of this study was to compare the prevalence and type of urinary incontinence in primiparous women sustaining OASIS and compare them to matched controls.

Study design, materials and methods

The study group consisted of 100 consecutive women with OASIS (95 with third degree tears and 5 with fourth degree tears) attending our perineal clinic between July 2003 and December 2004. 104 women (matched for age, parity, length of labour and instrumental delivery) who sustained a spontaneous second degree tear or had a mediolateral episiotomy were used as the control group. Therefore the only difference between the two groups was that the study group (OASIS) had sustained an obstetric anal sphincter injury. All women completed the validated ICIQ-SF Questionnaire 10 weeks after delivery. Statistical analyses were performed using the Mann Whitney U test to compare the incontinence scores between the groups and the chi-square test was performed for categorical data regarding urinary incontinence.

Results

Compared to the controls at 10 ± 5 (SD) weeks after delivery significantly more women with OASIS reported urinary incontinence (Table 1). This difference was also apparent when the incontinence score was compared (Table 1). The Odds Ratio for overall incontinence in those with oasis was 1.49, (95% CI = 1.15 to 1.96) compared to women without OASIS. The type of urinary symptoms between the groups is shown in Table 2. Women with OASIS were significantly more likely to suffer with stress incontinence (33% vs 14%; p= 0.02) with an Odds Ratio for of 1.6 (CI= 1.23 to 2.08) compared to the controls.

**Table1: Urinary Incontinence and score in women with OASIS and controls**

| | **OASIS n=100** | **Controls n=104** | **P value** |
|---|---|---|---|
| Overall urinary incontinence | 39 (39%) | 22 (21.2%) | 0.005 |
| Incontinence score Mean (SD) | 2.36 (3.6) | 1.2 (2.7) | 0.009 |

**Table 2: Type of urinary incontinence according to symptoms?**

| When does urine leak? | OASIS n=100 | Controls n=104 | P value |
|---|---|---|---|
| Never | 61 (61%) | 82 (76.9%) | 0.005 |
| When you cough and sneeze | 30 (30%) | 12 (11.5%) | 0.001 |
| When you are physically active | 12 (12%) | 4 (3.8%) | 0.030 |
| **When you cough, sneeze, and physically active** | **33 (33%)** | **15 (14.4%)** | **0.002** |
| When you are asleep | 3 (3%) | 0 | 0.075 |
| Before you can get to the toilet | 18 (18%) | 10 (9.6%) | 0.082 |
| When you have finished urinating | 2 (2%) | 2 (1.9%) | 0.968 |
| For no obvious reason | 6 (6%) | 2 (1.9%) | 0.134 |
| All the time | 0 | 1 (1%) | 0.326 |

Interpretation of results

This is the first study to establish the prevalence of urinary incontinence in women sustaining OASIS using a validated questionnaire and comparing them to matched controls. It has previously been shown that many OASIS are being missed clinically (3). We therefore ensured that our control group had no evidence of "occult" injuries by having all perineums rechecked immediately after delivery and performing anal endosonography. We found that about 40% of women who sustain OASIS develop urinary incontinence, the majority of whom (33% of the OASIS group) reported stress incontinence. This is also reflected in the continence score. The significantly high prevalence of stress incontinence in women suffering with OASIS suggests the possibility of a common mechanism affecting pelvic floor function.

Concluding message

Women who sustain OASIS are at a significantly increased risk of developing urinary stress incontinence. The aetiology remains to be established but either mechanical disruption to the supporting structures of the urethra and pelvic floor or neuropathy are possible mechanisms. This study highlights the importance of enquiring about urinary incontinence in women with OASIS and this information may be useful when counselling women. We can now focus on risk factors associated with combined OASIS and urinary incontinence with a view to preventing morbidity. Further follow up is currently underway to establish the natural history and clinical impact of urinary incontinence in women with OASIS.

References


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