

## OBSTETRIC ANAL SPHINCTER INJURIES (OASIS): 4-YEAR TREND ANALYSIS USING HOSPITAL EPISODE STATISTICS DATA

### Hypothesis / aims of study

Obstetric Anal Sphincter Injuries (OASIS) represent a serious form of morbidity, that can affect women in the short and long term, even with accurate diagnosis and adequate primary repair (1). Hospital episode statistics in England allows for trend analysis to monitor any change in disease and/or management over time (2). To date, no such analysis has been carried out in relation to obstetric anal sphincter injuries (OASIS). The aim of this study was to examine the trend of Obstetric Anal Sphincter Injuries (OASIS), using hospital episode statistics. As this form of obstetric perineal trauma could be influenced by the rate of episiotomy and forceps delivery (3), the rate and trend of all forms of obstetric perineal trauma as well as different types of deliveries were assessed as well.

### Study design, materials and methods

An on line data search of the Hospital Episode Statistics website ([www.hesonline.nhs.uk](http://www.hesonline.nhs.uk)) was carried out. The rate of various forms of obstetric perineal trauma was calculated against the total number of vaginal deliveries. The rate of various forms of operative deliveries was calculated against the total number of deliveries.

### Results

Data were available for the 4 year period from 2002-2003 till 2005-2006. The number and rate of various forms of obstetric perineal trauma are shown in table 1 and illustrated in figure 1 (a & b). The number and rate of various types of deliveries are shown in table 2 and illustrated in figure 2.

Year	Total No. of vaginal deliveries	No. (%) of first / second degree perineal tears	No. (%) of episiotomies	No. (%) of Obstetric Anal Sphincter Injuries (OASIS)
2002/03	399288	122673 (30.72%)	1923 (0.48%)	2961 (0.74%)
2003/04	423901	131785 (31.09%)	1763 (0.42%)	3931 (0.93%)
2004/05	426850	134110 (31.42%)	1852 (0.43%)	4529 (1.06%)
2005/06	436224	134934 (30.93%)	2666 (0.61%)	5404 (1.24%)

Table 1: Annual number and rate of various forms of obstetric perineal trauma.

Year	Total number of deliveries	Number (%) of ventouse deliveries	Number (%) of forceps deliveries	Number (%) of Caesarean sections
2002/03	519498	37850 (7.29%)	17898 (3.45%)	120178 (23.13%)
2003/04	553485	39530 (7.14%)	19429 (3.51%)	129546 (23.41%)
2004/05	558591	41335 (7.40%)	20409 (3.65%)	131709 (23.58%)
2005/06	574672	40743 (7.09%)	22542 (3.92%)	138413 (24.09%)

Table 2: Annual incidence and rate of all types of operative delivery.

### Interpretation of results

Obstetrics Anal Sphincter Injuries (OASIS) have risen steadily by 68% over the 4 year period 2002-06. The increase was higher than an increase in episiotomy as well as forceps delivery and happened despite a small increase in the number of caesarean sections. Although this, could be due to increased awareness and therefore better detection, over diagnosis with this increased awareness is a possibility. Known risk factors like induction of labour, epidural analgesia, prolonged second stage and foetal birth weight, which has been on the increase, might also be relevant, though could not be assessed through hospital episode statistics. Other potential factors, such as the skill of performing episiotomy and instrumental delivery should not be ignored, especially in relation to training.

### Concluding message

Obstetric Anal Sphincter Injuries (OASIS) appear to be on the rise and should therefore be monitored and investigated further.

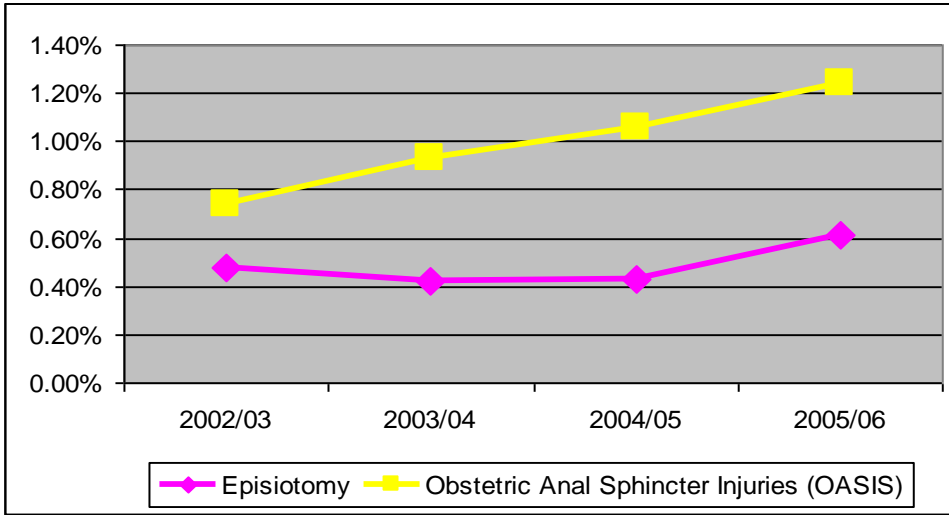


Figure 1a: Trend illustration of episiotomy and obstetric anal sphincter injuries.

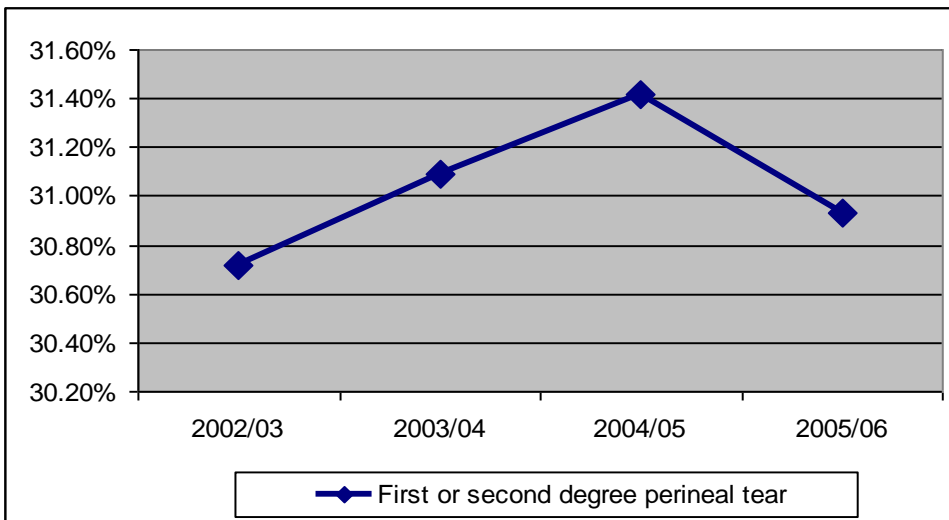


Figure 1b: Trend illustration of first or second perineal tear.

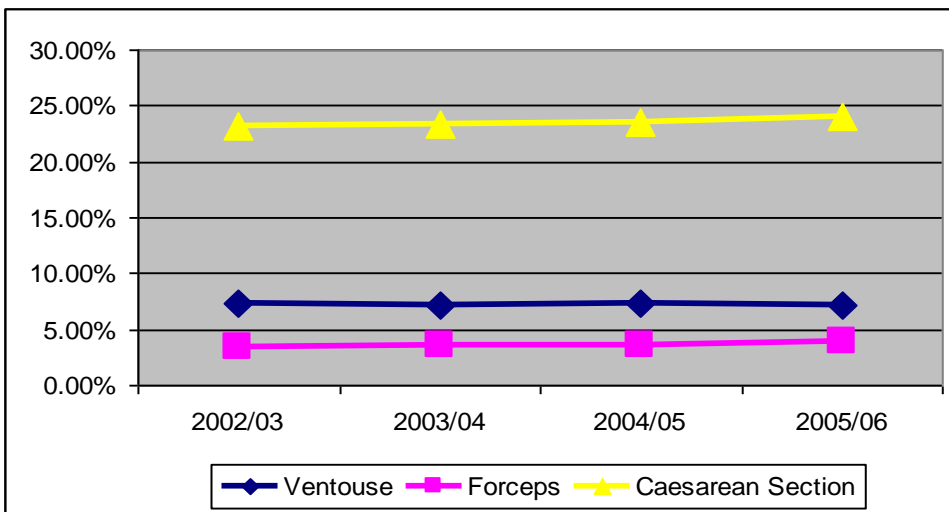


Figure 2: Trend illustration of various types of operative delivery.

References

1. Fitzpatrick M, O'Herlihy C. Short-term and long-term effects of obstetric anal sphincter injury and their management. *Current Opinion in Obstetrics and Gynecology* 2005; 17: 605-610.
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3. Eogan M, O'Herlihy C. Diagnosis and management of obstetric anal sphincter injury. *Current Opinion in Obstetrics and Gynecology* 2006; 18:141-146.

<i>Specify source of funding or grant</i>	None
<i>Is this a clinical trial?</i>	No
<i>What were the subjects in the study?</i>	HUMAN
<i>Was this study approved by an ethics committee?</i>	No
<i>This study did not require ethics committee approval because</i>	None required, analysis of national figures obtained on line, no direct patient involvement.
<i>Was the Declaration of Helsinki followed?</i>	Yes
<i>Was informed consent obtained from the patients?</i>	No