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A STUDY OF RISK FACTORS AND MANAGEMENT OF OBSTETRIC ANAL SPHINCTER INJURY IN A DISTRICT HOSPITAL IN UK.

Hypothesis / aims of study
Obstetric anal sphincter injury has an overall incidence of 1% of all vaginal deliveries. This includes all third degree and fourth degree perineal tears. It is the leading cause of fecal incontinence in women. There is increased awareness amongst obstetricians also due to the high rate of litigation in this area. A good repair performed by an appropriately trained obstetrician reduces the morbidity caused by the injury. The aim of our study was to look into the risk factors suggested to increase susceptibility to obstetric anal sphincter injury, the method employed and the functional outcome in patients undergoing operative repair.

Study design, materials and methods
We retrospectively studied the case notes of women undergoing third and fourth degree perineal tears in our trust from the period of August 2012 to August 2013 inclusive. Demographic information was collected about the possible pre disposing factors eg. Age, parity, ethnicity, gestation, mode of delivery, use of epidural anaesthesia, position at delivery and birth weight. The method of repair was studied looking into the experience of the surgeon doing the procedure, method of repair and post operative instructions. We then studied the follow up, which included provision of physiotherapy, 6 week post natal follow up by obstetrician and then 3 month follow up by urogynaecologist in our trust. The details of the history and examination at follow up included muscle tone, healing, assessment of symptoms and discussion of future pregnancy and mode of delivery.

Results
Eighteen patients were identified to have suffered anal sphincter injury.This constituted just over 1% of the vaginal deliveries in our trust. Out of them 16 were 3rd degree tears and two were 4th degree tears. Of the third degree tears, we had 5 women with 3a, 7 with 3b and 5 with 3c tears. We looked at the pre disposing factors; their age ranged from 17 to 38.Twelve women were nulliparous (66%), sixteen were of European ethinicity (88%). None of them had suffered a previous anal sphincter injury. Only four (22%) had induction of labour performed and nine of them (50%) had assisted instrumental deliveries. Their average birth weight was 3492 gms. Other risk factors looked into were their gestation at delivery and position at birth. The commonest position was occipito anterior. The details of their management were looked into regarding the seniority and experience of the surgeon, the surgical method of repair and the post operative advice given. There was good adherence to the local guidance and this was well documented in the specific proforma. All patients were referred for physiotherapy. The details of the 6 week post natal visit were studied and then the 3 month urogynaecology follow up visit. Most women had good functional results. Only 2 women were still symptomatic and only one woman who had suffered a fourth degree tear needed further referral to the colorectal surgeons.

Interpretation of results
In our study, nulliparity and instrumental delivery were associated with anal sphincter injury and appear to be contributing factors. As the population in our trust is predominantly European it was difficult to attribute ethnic variation. Surgical repair was performed satisfactorily by standardised methods as per the guidelines and only 2 patients were symptomatic (one with fecal incontinence and one flatus only) at their 3 month follow up.

Concluding message
Good efforts to identify and repair anal sphincter injury at delivery by an experienced operator using standardised surgical techniques to a high standard greatly improves outcomes and minimises the morbidity in terms of fecal incontinence and sphincter defects. This is evident in our study and emphasises the importance of good repair technique and follow up.

Disclosures
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