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Editorial

Protecting the pelvic floor at vaginal delivery

Vaginal delivery is the natural and logical conclusion of pregnancy, a physiological event which is considered as one of the most important milestones in a woman's life. Vaginal delivery is the preferred delivery option in most cultures. But there is no denying that natural childbirth is a major precursor of trauma to the pelvic floor resulting in pelvic organ prolapse, urinary and anal incontinence. This has resulted in a change in practice and attitudes in some settings. In some Brazilian hospitals for example, only 15% of pregnancies are delivered vaginally [1]. In a survey of female obstetricians, 30% said they would opt for elective caesarean section in an otherwise uncomplicated vaginal delivery, to protect against long-term pelvic floor sequelae [2].

An overview of the risk factors for pelvic floor, genital tract and perineal injury shows that most of these are not modifiable. The greatest degree of risk comes from a first labor, birth weight greater than 4000 grams, prolonged second stage of labor, instrumental delivery and a family history of pelvic organ prolapse. Though these factors have been shown in various studies to be significant risk factors, the odds ratios are low and the findings could have been coincidental [3]. Obesity and diabetes mellitus are potentially modifiable on the part of women, but these are chronic and difficult to control. Some risk factors such as prolonged pushing efforts in the second stage, instrumental delivery at a high station of the fetal head and unnecessary manual stretching of the perineum are potentially modifiable with standard obstetric teaching being followed.

The technique of conducting the second stage of labor and delivery are steeped in tradition and as such, are never subjected to audit or examination under the lens of evidence based medicine. Consequently, they may be the most entrenched habits of an obstetrician that are difficult to reason with or modify. A number of interventions at vaginal delivery have been proposed to modify the risk of perineal damage. Episiotomy has been the most studied of all the interventions. Though there are some studies which claim that an episiotomy actually increases the risk of anal sphincter injury, this is true for midline episitomies. Mediolateral episiotomy in particular, when performed with an angle of 25°, is associated with a lower incidence of extension into the anal sphincter than midline episiotomy. Metaanalysis indicates that restrictive rather than routine episiotomy practice reduces the risk of posterior compartment injury and the need for suturing, as well as promoting healing, but at the expense of an increase in anterior perineal trauma [4]. Antenatal perineal massage in the third trimester has been suggested to be of benefit by bringing about a softening and stretching of the perineal tissues. A Cochrane review found that perineal massage reduces the risk of episiotomies and perineal trauma. However, there was no benefit in terms of reducing the risk of incontinence of urine, stool or flatus [5]. A number of other practices such as modifications in delivery position (lithotomy versus lateral), hand maneuvers (hands on versus hands off), warm compresses during the second stage and the use of lubricants have been studied. The results of these interventions are equivocal and some are being studied further.

The most radical method of preventing pelvic floor and perineal trauma is to avoid vaginal delivery completely. The use of cesarean deliveries for this intent has, of course, never been subjected to randomized trials and this is unlikely to happen any time soon. The current evidence is from cohort studies and there is a clear benefit of reducing short term perineal damage with cesarean delivery. The impact of cesarean delivery on long term pelvic floor function is not defined. There is some evidence that cesarean delivery without labor may reduce the risk of urinary incontinence amongst primigravidae. Even for these women, previous or subsequent vaginal delivery, obesity, diabetes and a family history will negate any benefit from cesarean delivery. In the long term, it is possible that ageing pelvic

tissues may counteract any benefit of cesarean section. The fetal and maternal risks associated with cesarean section need to be weighed against possible short term gains and long term uncertainties to the pelvic floor and perineum.

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