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Leading article

Faecal incontinence after vaginal delivery

Causes much distress, and impairs quality of life

Faecal incontinence, defined as loss of voluntary control for passage of flatus or faeces, has been reported in up to 10% of western women after vaginal delivery (1). Similar data from south Asia are lacking. Studies have shown that caesarean section protects women from faecal incontinence (2,3). Common symptoms include uncontrollable passage of flatus, urgency to defecate, faecal soiling and gross faecal leakage. Because these symptoms often occur at socially inconvenient times, the resulting psychological morbidity and sense of reduced personal hygiene may severely impair quality of life (4). Women with incontinence after vaginal delivery may not seek medical help because they believe that minor anorectal symptoms are part of childbirth, and because maternal ill-health often takes second place to the needs of the newborn. Latterly, however, an increasing number of young women are seeking help for post-obstetric faecal incontinence (5,6). Both clinical and physiological data from these patients have helped improve our knowledge of the pathophysiology of this condition.

Vaginal delivery may result in either disruption of the anal sphincters or cause neurological injury to the pudendal nerves that innervate the anal sphincters (7). Prolonged straining during the second stage of the labour is thought to be a key aetiological factor in stretch-induced damage to the pudendal nerve (8). The incontinence that follows pudendal nerve injury may be transient if pudendal nerve damage is reversible, as it is in the majority (60%), and last up to six months after vaginal delivery (9). In the remainder pudendal nerve injury is permanent and will lead to progressive worsening of incontinence. Other factors may contribute to progressive nerve injury in the post-partum period. Some women develop anal mucosal prolapse (10), which often results in a sense of incomplete evacuation and hence prolonged straining during defecation. Multiparity, forceps assisted delivery, cephalo-pelvic disproportion and third or fourth degree perineal tears associated with vaginal delivery have been identified as independent variables which may worsen prognosis (11).

Women are at risk of incontinence from the first vaginal delivery. In a prospective study of 150 consecutive women having vaginal delivery for the first time, anal sphincter disruption, as identified by anal endosonography, was found in 37%, with symptoms developing in only 10% (12). This study showed that the majority had an occult sphincter disruption which may be made worse in future deliveries, resulting in faecal incontinence. It is essential to inquire about previous vaginal deliveries in women having anal operations such as haemorrhoidectomy and anal fistulectomy because the risk of faecal incontinence may be greater in them.

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Disruption of the anal sphincters is mainly anterior. The site of disruption has been found to lie adjacent to a previous episiotomy site, so that episiotomy may be related to anal sphincter disruption (13,14). The majority of anal sphincter defects are found to be in the external anal sphincter anteriorly, but a small proportion of anal sphincter defects lie in the internal anal sphincter (15). Overall, in a prospective survey of caucasian women having faecal incontinence after vaginal delivery, 29% were found to have pudendal neuropathy alone, 14% had an anal sphincter defect and the majority, 57%, were found to have pudendal neuropathy combined with an anal sphincter defect (14). A rectovaginal fistula may develop in those with disruption of the anal sphincter when vaginal delivery is allowed to progress unchecked as this may result in ischaemia of the thin septum of tissue separating the rectum from the vagina.

Management of faecal incontinence after vaginal delivery must include a comprehensive history and physical examination that must include digital assessment of the anal sphincter complex. Flexible sigmoidoscopy is performed to exclude mucosal inflammation from an unrelated cause, which may worsen symptoms. Specialised investigation such as anorectal physiology and endo-anal ultrasonography or magnetic resonance images of the anal sphincter are performed to map the extent of anal sphincter disruption (15). This information is essential for baseline evaluation of the anal sphincter complex and to monitor progress.

The first line of treatment for incontinence after vaginal delivery without a rectovaginal fistula is non-operative. This includes assessment of sphincter damage followed by dietary modification aimed at increasing faecal bulk, use of constipating agents such as loperamide, which also increases threshold sensitivity of the internal anal sphincter (16), use of evacuating micro-enemas and biofeedback therapy. Biofeedback has been shown to improve anal incontinence symptoms in up to 90% of patients with incontinence (17).

The exact mechanism by which biofeedback improves incontinence remains unclear but some believe that improvement in anal sphincter function is effected through the brain-gut axis (17). Biofeedback therapy for incontinence is time consuming, requires trained therapists who are highly motivated and is currently available in only a few centres.

Surgical reconstruction is undertaken if non-operative treatment has not resulted in significant improvement in symptoms or in rectovaginal fistula. Here too, those with an isolated sphincter defect, without pudendal nerve injury, are likely to experience the greatest benefit from operation. Operative treatment involves anal sphincter repair for disruption of the anal sphincter, sphincter and pelvic floor repair for those with anal sphincter disruption associated with pudendal neuropathy (18) and, in a proportion of patients, replacement of the anal sphincter with a neo-anal sphincter (19).

Since a rectovaginal fistula that results from difficult vaginal delivery is almost always associated with disruption of the anal sphincter, it is believed that successful repair of a rectovaginal fistula must incorporate concomitant repair of the anal sphincters (20). A proximal diverting stoma alone may not be helpful in restoring anal sphincter function, although the fistula may heal in some. Timing of repair of the fistula after injury has been controversial. Often obstetricians have been compelled to undertake early repair some days after the injury because of pressure from the patient. However, colorectal surgeons believe that sufficient time must be allowed for scar tissue to be laid down adjacent to the anal sphincter disruption that would enable secure suture placement that is essential for successful anal sphincter reconstruction. Ideally this is thought to be about two to three weeks after the injury.

It is essential to provide clear guidelines to patients with faecal incontinence after obstetric trauma to prevent further damage. Most advise management of future deliveries by a short trial of labour which includes the most senior member of the obstetric team in attendance. In reality, most females will decide to have subsequent deliveries by elective caesarean section. For surgeons, it is important to inquire about anal sphincter disruption that may have resulted from difficult vaginal delivery before undertaking operations for anal conditions such as haemorrhoids, anal fistula and anal fissure. These operations are likely to be associated with a greater risk of incontinence in women who may have a concomitant occult anal sphincter defect.

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