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Review article

Postpartum Incontinence. Narrative Review☆

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ABSTRACT

The development of fecal incontinence after childbirth is a common event. This incontinence responds to a multifactorial etiology in which the most common element is external anal sphincter injury. There are several risk factors, and it is very important to know and avoid them. Sphincter injury may result from perineal tear or sometimes by incorrectly performing an episiotomy. It is very important to recognize the injury when it occurs and repair it properly. Pudendal nerve trauma may contribute to the effect of direct sphincter injury. Persistence of incontinence is common, even after sphincter repair. Surgical sphincteroplasty is the standard treatment of obstetric sphincter injuries; however, sacral or tibial electric stimulation therapies are being applied in patients with sphincter injuries not repaired with promising results.

Incontinencia fecal posparto. Revisión de conjunto

Palabras clave:
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RESUMEN

El desarrollo de incontinencia fecal tras el parto es un hecho frecuente. Esta incontinencia responde a una etiología multifactorial en la que el elemento más frecuente es la lesión del esfínter anal. Existen diversos factores de riesgo, que es muy importante conocer y evitar. La lesión esfinteriana puede producirse por desgarro perineal o en ocasiones por la realización de una episiotomía de forma incorrecta. Es muy importante reconocer la lesión cuando se produce y repararla de forma adecuada. El traumatismo de los nervios pudendos puede incrementar el efecto de las lesiones esfinterianas directas. Es frecuente la persistencia de incontinencia a pesar de la reparación esfinteriana primaria. La esfinteroplastia quirúrgica es el tratamiento estándar de las lesiones esfinterianas obstétricas, sin embargo, las terapias de estimulación eléctrica sacra o tibial están siendo aplicadas en pacientes con lesiones esfinterianas no reparadas, con resultados prometedores.

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Introduction

Fecal incontinence is very frequent after childbirth. Prevalence studies in different populations and postpartum series of women at certain hospitals have reported global incontinence rates ranging from 4% to 59%.[1–11] In our setting, a series of Spanish cohorts with more than 1000 nulliparous women found an incidence of immediate postpartum fecal incontinence of 7.3%.[12]

The variability in the incidences published is quite striking. This is perhaps because women often do not mention incontinence to their physician, obstetricians do not consider this problem in all cases, the degree of soiling may vary greatly and also vary over time, and measuring subjective symptoms is difficult.

The etiology of postpartum fecal incontinence is multifactorial, and its treatment requires multidisciplinary action. Therefore, its management is occasionally complex and accompanied by disheartening treatment results.

The objective of this article is to provide an update on different key aspects in obstetrical fecal incontinence by reviewing the literature. We also provide the experience of our own group in order to determine what type of management is best for this condition.

Methodology

We have reviewed the existing literature in the PUBMED and COCHRANE databases. Search criteria included the following key words: postpartum fecal incontinence, obstetrical fecal incontinence, obstetrical injury and anal sphincter, perineal tears and anal sphincter, postpartum anal sphincter injuries. Included in the study were all those publications from 1990 to date.

Causes of Fecal Incontinence After Childbirth

During childbirth, there are several situations that can condition the development of injuries to the posterior compartment and potentially cause subsequent fecal incontinence.

First of all, perineal tears are frequent during delivery. These tears can occasionally affect the anal sphincter muscles, most frequently the external anal sphincter, which controls voluntary fecal continence. The rate of anal sphincter lesions is variable but ranges between 2% and 30% in different series.[3,13–17]

Episiotomies, which are sometimes done to favor the delivery of the fetus, can be strongly related with direct sphincter injuries by the episiotomy itself when done incorrectly and sphincter muscle fibers are cut.[2,3,14,18]

Another frequent lesion during childbirth is damage to the pudendal nerves.[6,19–22] These injuries do not seem to be secondary to direct trauma during delivery, but instead to traction/stretching by the distension of the perineum during a lengthy labor.

Finally, the trauma to and injury of other perineal muscles, mainly the puborectalis and other components of the levator ani, can increase the injuries to the posterior compartment and sphincter apparatus, resulting in serious consequences.

The situation of the posterior perineal compartment with regard to the birth canal is the determining factor that frequently leads to injury of the compartment. Its shape forms a J, where the bottom of the J is the rectum. The axial forces developed during labor pivot on the posterior compartment, causing trauma.[23]

Classification of Perineal Tears

The classification of perineal tears caused during delivery is based on the injured anatomical layers in the mid and posterior compartments (skin, mucosa and musculature)[24] (Table 1).

It is based on the elements involved or damaged by the tear. The laceration generally initiates in the vaginal mucosa and can progress, depending on the intensity, and injure (from front to back) the perineal musculature, the external anal sphincter, internal anal sphincter, and, finally, the anal mucosa. This latter case would result in complete anovaginal contact; if it is not repaired, or done so incorrectly, a rectovaginal fistula could develop. When in doubt about which anatomical planes are affected during a tear, it should be classified as the higher grade.

Grade 3 and 4 injuries are those that affect the anal sphincter apparatus and can cause fecal incontinence.

Risk Factors Related With Sphincter Lesions During Delivery

There are a multitude of studies in the literature that try to apply scientific evidence to determine the factors of childbirth that favor the appearance of postpartum fecal incontinence or the production of sphincter lesions[2,3,9,10,15,18,25,26] (Table 2).

Episiotomy has been related with fecal incontinence due to direct sphincter injury.[2,3,15,18] Some studies have demonstrated that systematic episiotomies have no advantages over their selective use in vaginal births, even in the case of operative vaginal deliveries.[27–29] In the article by Signorello et al.[18] the incidence of fecal incontinence was greater in the

Table 1 – Classification of Obstetrical Tears.

Grade 1	Laceration of the vaginal epithelium
Grade 2	+Laceration of the perineal musculature
Grade 3	+Laceration of the anal sphincter
3a	<50% thickness of the external sphincter
3b	>50% thickness of the external sphincter
3c	Affects the internal sphincter
Grade 4	Injury to the anal epithelium

Source: Sultan et al.[24]