



Faecal Incontinence After Obstetric Anal Sphincter Injury: A Narrative Review of Sacral Neuromodulation and Why So Few Women Report the Symptom

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Received: 28 January 2025; Accepted: 2 June 2025; Published: 20 October 2025

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Abstract

Faecal incontinence after childbirth is common, treatable, and almost never mentioned. The literature contains two separate failures of visibility: the injury that is not recognised in the delivery room, and the symptom the woman does not raise afterwards. Both are quantified, and both are addressable.

Objectives: To review the published evidence on faecal incontinence following obstetric anal sphincter injury: how often the injury occurs and is missed, how often symptoms follow and persist, why they are under-reported, and what sacral neuromodulation and the alternatives achieve.

Material and Methods: Narrative review of systematic reviews, meta-analyses, national registry data, randomised trials of neuromodulation and qualitative studies indexed in PubMed and the major obstetric, colorectal and urogynaecology journals. No new patient data were generated; every estimate quoted is one published by the original investigators.

Results: Obstetric anal sphincter injury complicates approximately 3 to 6 per cent of vaginal births in primiparous women and 0.8 to 1.7 per cent in multiparous women, and more than half of injuries are not recognised in the delivery room. Among women with an injury and one subsequent vaginal birth, long-term anal incontinence was reported in 41.0 per cent after a third-degree tear and 58.8 per cent after a fourth-degree tear. Fewer than half of affected patients volunteer their symptoms. Secondary sphincteroplasty achieves short-term continence in 60 to 80 per cent, with up to 40 per cent deteriorating over 5 to 10 years.

Conclusion: The dominant clinical problem is not that the treatments are poor but that the patients are not identified. Systematic enquiry at postnatal review costs nothing and would find most of them, and the case for it does not depend on any of the contested comparisons between surgical options.

Abbreviations: AI – Anal Incontinence, FI – Faecal Incontinence, FIQL – Faecal Incontinence Quality of Life scale, OASI – Obstetric Anal Sphincter Injury, SMIS – St Mark's Incontinence Score, SNM – Sacral Neuromodulation.

Keywords: Obstetric Anal Sphincter Injury; Faecal Incontinence; Sacral Neuromodulation; Under-Reporting; Postnatal Care

Introduction

Obstetric anal sphincter injury describes third- and fourth-degree perineal tears involving the anal sphincter complex, graded by the Sultan classification [1,2]. It complicates roughly 3 to 6 per cent of vaginal births in primiparous women and 0.8 to 1.7 per cent in multiparous women, and approximately 85 per cent of those affected are having their first baby [3,4].

The consequence that matters is anal incontinence, defined as involuntary loss of flatus, mucus or stool. Faecal incontinence is estimated to affect around 9.4 per cent of adult women overall, and one in five of those affected reports a moderate to severe effect on quality of life [3,5,6], and the effect on daily function is substantial [34,35].

Two features of this condition set it apart. The injury is frequently not diagnosed at the time it happens, and the symptom is frequently not disclosed afterwards [7,8]. This review examines both, alongside what the available treatments, including sacral neuromodulation, actually deliver.

Material and Methods

Search strategy: PubMed and the archives of the major obstetric, colorectal, urogynaecology and physiotherapy journals were searched for studies of anal sphincter injury and its consequences. Search terms combined obstetric anal sphincter injury, third-degree tear and fourth-degree tear with anal incontinence, faecal incontinence, sacral neuromodulation, sphincteroplasty, under-reporting and postnatal. Reference lists of society guidance [9,10] were screened by hand for primary sources.

Eligibility: Studies were included if they reported the incidence or recognition of the injury, the incidence or persistence of subsequent symptoms, disclosure and help-seeking behaviour, or the outcome of an intervention. Studies of faecal incontinence from other causes are cited where they establish a treatment effect and are identified as such.

Data extraction and handling: Design, setting, sample size, parity, the definition of incontinence used and the duration of follow-up were extracted as published. The definition is reported alongside every prevalence figure, because incontinence to flatus and to solid stool differ by an order of magnitude in reported frequency and the two are often combined. No pooling or re-analysis was performed. Figures 1 to 4 and Tables 1 and 2 reproduce published values only. This is a narrative synthesis and was not registered as a systematic review.

Results

How often the injury occurs: Reported incidence varies with diagnostic standards, ranging in published series from under 1 per cent to around 9 per cent of vaginal deliveries. The most consistent figures are 3 to 6 per cent in primiparous and 0.8 to

1.7 per cent in multiparous women (Figure 1) [3,4]. Risk factors are well characterised: primiparity, instrumental delivery, fetal macrosomia, advanced maternal age and prolonged second stage [11,12]. Incidence is modifiable: national programmes teaching manual perineal protection roughly halved recognised injury in Norway, where the rate fell to 1.8 per cent of vaginal deliveries, with comparable results in Denmark [4,13,14].

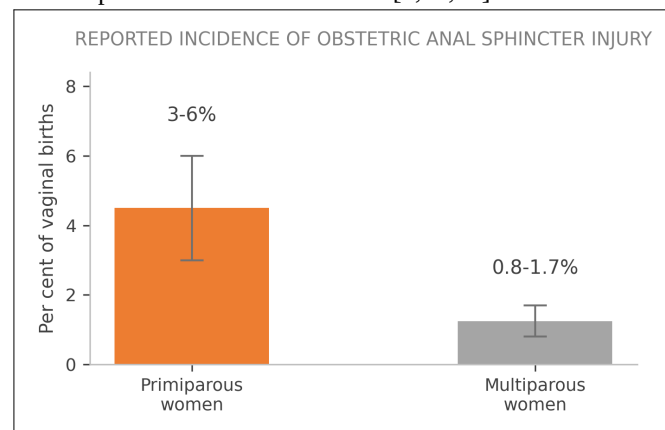


Figure 1: Reported incidence of obstetric anal sphincter injury by parity [3,4]

How often it is missed: More than half of sphincter injuries are not recognised in the delivery room [7,15,16]. Endoanal ultrasound performed systematically after delivery identifies defects in women whose examination was recorded as normal, and structured re-examination by a trained clinician substantially increases detection [15,17]. An injury not recognised is not repaired, and primary repair is the intervention with the best functional outcome.

What follows: Symptoms are common and do not settle with time. Among women who are initially asymptomatic after injury, around 10 per cent become symptomatic within three years [18]. Among those who sustain an injury and then have a further vaginal birth, long-term anal incontinence has been reported in 41.0 per cent after a third-degree tear and 58.8 per cent after a fourth-degree tear (Figure 2) [18,19]. Women with recurrent injury have a reported 50.0 per cent incidence of anal incontinence by 8.5 years and 48.8 per cent incidence of faecal incontinence by age 60 [18,20]. For comparison, parous women without recognised injury report incontinence to flatus in 15 to 32 per cent and to stool in 5 to 7 per cent at four to five years [7,21].

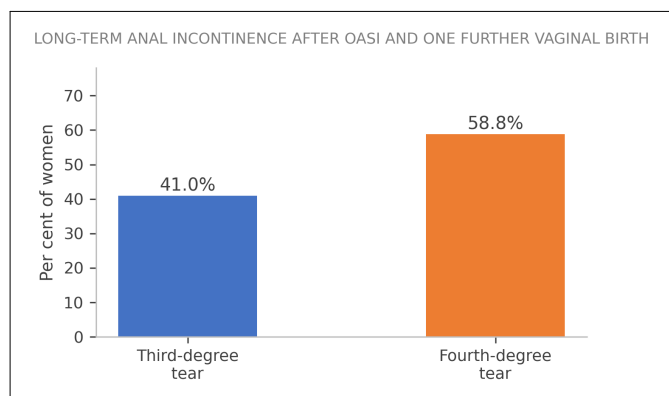


Figure 2: Long-term anal incontinence after obstetric anal sphincter injury followed by one further vaginal birth, by tear grade [18,19]

Why so few women report it: Fewer than half of affected patients volunteer their incontinence symptoms [3,22]. The reasons documented in qualitative work are consistent across settings: shame, an assumption that the symptom is a normal consequence of childbirth, uncertainty about whom to tell, and prior experience of being dismissed [22,23,24]. Postnatal review is brief and dominated by the baby, and the question is rarely asked directly. Together with the injuries missed at delivery, this produces two sequential filters, each removing roughly half of the affected population from view (Figure 3) [7,22].

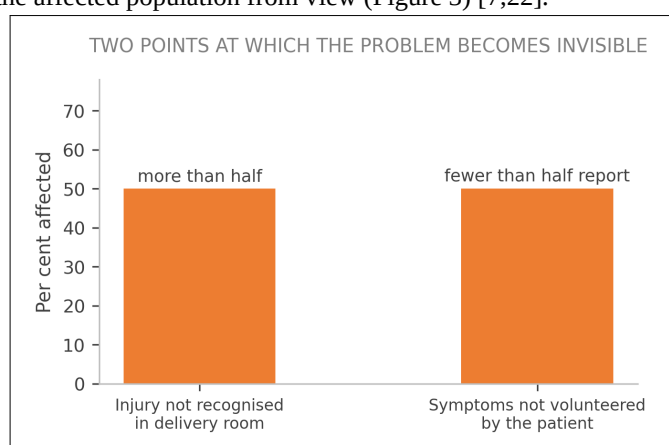


Figure 3: The two points at which affected women become invisible to services [7,22]

Study	Design and cohort	Principal reported finding
Walsh et al. 2023 [3]	Clinical practice review	OASI 3-6% primiparous; fewer than half report symptoms
Okeahialam et al. 2022 [19]	Network meta-analysis by tear grade	Incontinence rises with grade of injury
Norwegian cohort [7]	Cross-sectional, parous women	More than half of injuries unrecognised at delivery
Caesarean review 2025 [18]	Systematic review and meta-analysis	41.0% after third-degree, 58.8% after fourth-degree tear
Thin et al. 2013 [25]	Systematic review of surgery for FI	Compared neuromodulation with sphincteroplasty
Rydningen et al. 2017 [26]	RCT, SNM vs bulking agent after OASI	Randomised comparison in this specific population
OASIS review 2025 [12]	Systematic review of sphincteroplasty	60-80% short-term success; up to 40% deteriorate by 5-10 years

Table 1: Principal studies reviewed, with the finding as reported by the original investigators

Conservative management first: Pelvic floor muscle training, biofeedback, bowel retraining and stool-consistency management are first-line and benefit a substantial proportion, though the randomised evidence is limited and heterogeneous [27,28,29]. In one large clinic audit, most patients referred for surgery had already received pelvic floor physiotherapy, biofeedback or nurse-led continence support [30]. These interventions are inexpensive and low-risk, and their principal limitation is again access rather than efficacy.

Sacral neuromodulation: Neuromodulation delivers low-amplitude stimulation to a sacral nerve root, with a percutaneous evaluation phase preceding permanent implantation. It was originally reserved for intact sphincters and has since been shown effective in the presence of sphincter defects [25,31,32]. In the clinic audit cited above it was the commonest surgical procedure performed for faecal incontinence, accounting for 28.9 per cent of operations against 22.0 per cent for sphincteroplasty [30]. A randomised trial in Norway compared it directly with submucosal injection of a bulking agent in women with incontinence after obstetric injury, using change in St Mark's score at six months as the primary outcome [26].

Sphincteroplasty and durability: Secondary overlapping sphincteroplasty remains the reference operation for a demonstrated defect, achieving short-term continence in 60 to 80 per cent of patients. Up to 40 per cent deteriorate over five to ten years (Figure 4) [12,33]. That decay is the central problem with the procedure and the reason neuromodulation has displaced it in many centres, though the comparison between them is largely observational [25,30].

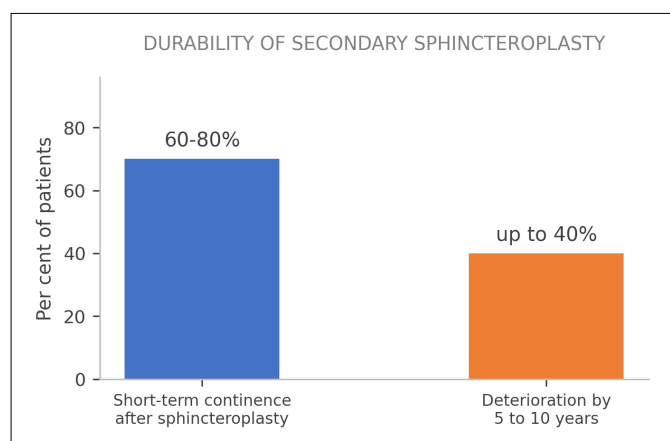


Figure 4: Short-term continence after secondary sphincteroplasty and deterioration over 5 to 10 years [12,33]

Stage	What is known	Where it fails
Injury at delivery	3-6% primiparous; risk factors known	More than half unrecognised at the time [3,7]
Primary repair	Best functional outcome when done well	Cannot be done if injury not identified [15,17]
Early symptoms	10% of asymptomatic women declare by 3 years	Postnatal review rarely asks directly [18,22]
Disclosure	Fewer than half volunteer symptoms	Shame; assumption that it is normal [3,22,23]
Conservative treatment	Low-risk, benefits many	Randomised evidence limited [27,28]
Surgery	SNM and sphincteroplasty both effective	Sphincteroplasty decays; comparison observational [12,25]

Table 2: The pathway after obstetric anal sphincter injury and where it breaks down

Discussion

The striking feature of this literature is that the treatments are reasonable and the identification is not. Conservative measures help many, sacral neuromodulation works in the presence of a sphincter defect, and sphincteroplasty produces good early continence [25,27,31]. None of that reaches a woman who was never asked.

The arithmetic of invisibility is worth setting out. More than half of sphincter injuries are not recognised at delivery [7,15]. Of the women who go on to develop symptoms, fewer than half volunteer them [3,22]. Those two filters operate in sequence and independently, and between them they account for the majority of the affected population. No improvement in surgical technique addresses either.

The reasons for non-disclosure documented in qualitative work are not mysterious and not the patient's failing. Women describe assuming that leakage after childbirth is normal, being unsure it is a medical matter, and fearing the reaction if they raise it [22,23,24]. Postnatal review in most systems is short and centred on the infant. A direct closed question about flatal and faecal control, asked routinely rather than when prompted, is the intervention with the largest plausible yield in this condition, and it has no cost and no risk.

On treatment, the honest position is that the comparative evidence is thin. Sacral neuromodulation has become the commonest operation for this indication, but its displacement of sphincteroplasty rests more on the observed durability problem with sphincteroplasty than on head-to-head randomised data [25,30,33]. The randomised trial in this specific population compared neuromodulation with a bulking agent rather than with sphincteroplasty [26]. Choosing between the operations remains a matter of defect size, local expertise and patient preference rather than of demonstrated superiority.

Study limitations

The limitations belong to the underlying literature. Incidence figures depend heavily on diagnostic standards and on whether systematic post-delivery examination was performed, so international comparison is unreliable [4,12,15]. Definitions of incontinence vary between studies and frequently combine flatal and faecal symptoms, which differ several-fold in frequency [7,21]. Prevalence estimates derived from clinic-attending populations under-count exactly the women this review argues are missed [22,30]. Long-term outcome data are largely observational, with attrition over the decades of follow-up required. Surgical comparisons are not randomised against each other, and series come from specialist centres [25,30]. Symptom scores are patient-reported and subject to the same disclosure problem the review describes [19]. And almost all of the evidence comes from high-income settings with formal postnatal review [13,14].

Conclusion

A woman with faecal incontinence after obstetric anal sphincter injury has treatable disease. Conservative measures help many, sacral neuromodulation works even when the sphincter is damaged, and sphincteroplasty restores continence in most patients for several years. The reason so few receive any of this is that the condition passes through two filters before it reaches a clinic: over half of injuries are never recognised at delivery, and over half of the women who develop symptoms never mention them. Both filters are addressable, and one of them requires only that someone asks the question at the postnatal visit. That is the finding this literature most consistently supports, and it is the cheapest thing in it.

Acknowledgements

The authors thank the investigators whose cohorts and trials are drawn together in this article, and the women who described symptoms in research settings that they had not raised in clinical ones.

Funding

No dedicated funding from public, commercial or charitable sources supported the preparation of this review.

Conflict of Interest

The authors declare no competing interests.

Ethics Statement

This article reviews previously published studies only. No new patient data were collected and no participants were recruited, so ethical approval was not required.

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Citation: Vermeer R, Kovacs L, Mortensen S. "Faecal Incontinence After Obstetric Anal Sphincter Injury: A Narrative Review of Sacral Neuromodulation and Why So Few Women Report the Symptom." *J Clin Case Stud* (2025): 001-006 doi: 10.5281/zenodo.22237015