ORIGINAL RESEARCH – QUANTITATIVE

Do women of reproductive age presenting with pelvic floor dysfunction have undisclosed anal incontinence: A retrospective cohort study

Julie Tucker [a,*], Luke Grzeskowiak [a,b], Elizabeth Mary Ann Murphy [c], Anne Wilson [d,e], Vicki L. Clifton [a,f]

[a] Robinson Research Institute, School of Medicine, University of Adelaide, Adelaide, Australia
[b] SA Pharmacy, Pharmacy Department, Flinders Medical Centre, Bedford Park, South Australia, Australia
[c] Colorectal Surgical Unit, Division of Surgery, Lyell McEwin Hospital, Elizabeth Vale, South Australia, Australia
[d] School of Medicine, Flinders University, Bedford Park, South Australia, Australia
[e] Prince of Wales Clinical School, University of New South Wales, Sydney, New South Wales, Australia
[f] Mater Medical Research Institute, University of Queensland, Brisbane, Australia

ABSTRACT

Background: Indirect and direct trauma following vaginal birth can negatively impact on the pelvic floor function increasing the risk of anal incontinence. It is often difficult for women to openly disclose that they have anal incontinence and there are limited data collection tools available for the identification of these women in a clinical setting.
Aim: This study aims to describe the prevalence of undisclosed anal incontinence in antenatal and postnatal women with pelvic floor dysfunction.
Methods: Retrospective cohort study of 230 antenatal and postnatal women referred to a Continence Nursing Service in a large tertiary hospital in South Australia, Australia, with pelvic floor dysfunction. A criteria list was utilised to access the primary reason for referral, anal incontinence assessments and attendance to an appointment.
Results: Anal incontinence was identified in 26% of women ($n = 59$). Anal incontinence was the primary reason for referral amongst 8 women, with the remaining 51 women identified as having anal incontinence following clinical screening via phone consultation. Eighty six percent of women stated they had not previously disclosed anal incontinence to health professionals. Overall, 71% of symptomatic women ($n = 28$ antenatal and $n = 14$ postnatal women) attended appointments to a service specialising in pelvic floor dysfunction.
Conclusion: Women presenting with urinary incontinence or other markers of pelvic floor dysfunction should be actively screened for anal incontinence as the prevalence of this condition is high amongst childbearing women.

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Summary of Relevance:

Problem

- Anal incontinence is underdiagnosed in pregnant and postnatal women.

What is Already Known

- Direct and indirect trauma to nerves, muscles and pelvic floor structures for two-thirds of first time mothers following vaginal birth contributes to pelvic floor trauma and pelvic floor dysfunction on the pelvic floor resulting in increased risk of anal incontinence. Disclosure of incontinence is difficult for women experiencing this problem and there is no routine screening in most clinical settings for this condition.

What this Paper Adds

- Routine clinical screening for anal incontinence identified a significant amount of symptomatic women. Once identified

* Corresponding author. Tel.: +61 427606356.
E-mail addresses: Julie.tucker@student.adelaide.edu.au (J. Tucker), luke.grzeskowiak@adelaide.edu.au (L. Grzeskowiak), Elizabeth.Murphy@sa.gov.au (E.M.A. Murphy), annewilson.rec@gmail.com (A. Wilson), vicki.clifton@mater.uq.edu.au (V.L. Clifton).

women are willing to attend clinical appointments for assessment and management of this condition, indicating that appropriate measures to encourage disclosure of this problem can lead to improved care of these women.

1. Introduction

An intact perineum following vaginal childbirth is not a true indicator that a pelvic floor is undamaged.[1] There is growing evidence that direct and indirect trauma to nerves, muscles and pelvic floor structures occur in 66% of first time mothers following vaginal birth contributes to pelvic floor dysfunction.[2–5] Pelvic floor dysfunction symptoms include bladder prolapse, vaginal prolapse, rectal prolapse and urinary and faecal incontinence.[6,7] The aetiology of pelvic floor dysfunction is multi-factorial and includes genetic background, nutrition, hormonal changes to the pelvic floor in pregnancy and medical co-morbidities. However mechanical and neural trauma can follow vaginal birth and are cited as the major risk factor pelvic floor dysfunction.[4,7,8] Pelvic floor dysfunction symptoms can be interrelated and the risk of worsening symptoms are compounded through subsequent childbirth and ageing.[5,6]

Obstetric anal sphincter injury (OASIS) and neural damage are known risk factors for anal incontinence (AI).[6,9–11] AI is defined as the accidental loss of solid or liquid stool and flatus.[12] The prevalence of OASIS is reported between 0.6 and 9% of women, however ultrasound findings suggest this is underreported, with 20–41% of women presenting with missed or occult sphincter damage on endo-anal ultrasound.[6,13,14] In women with a documented OASIS the prevalence of AI is variable and reported between 7 and 74% of women.[14–16] Disclosure of AI to health professionals is often complex for women as it is a debilitating condition which negatively impacts on the physical and psychological wellbeing of young women's lives and results in underreporting of this complaint.[17] Research identifies that routine clinical screening could identify women who have not previously disclosed AI, but current evidence suggests there is no universal, routine screening for AI in pregnant and postnatal women.[1,10,16,18,19]

The early identification of AI can result in the improvement of short and long-term health outcomes for those afflicted.[1,18,20,21] Once AI is identified, then appropriate clinical approaches can be introduced that may reduce the deterioration of this condition over time and provide women with options of care to improve their quality of life.[20,22,23] However there appears to be no routine clinical screening for AI in this group of at risk women. We have retrospectively examined whether pregnant and postnatal women referred to a Continence Nursing Service (CNS) for any pelvic floor dysfunction also had a complication of AI using the St Marks Vaizey incontinence score. The purpose of this analysis was to determine whether AI is unidentified at the time of referral by health professionals which may explain why it is often underreported in at risk women. Additionally we assessed how many symptomatic women who were offered further assessment at a service which specialised in bowel control attended appointments.

2. Materials and methods

Ethics approval was received through two Human Research Ethics Committees; University of Adelaide Human Research Ethics Committee and the Adelaide Health Service Human Research Ethics Committee.

This retrospective cohort study was completed during May 2014 to May 2015 and involved a review of 288 case-notes for women referred to the Continence Nursing Service (CNS) at a Level 2 tertiary centre in Adelaide, Australia, between January 2011 and December 2013. The CNS specialises in behavioural management of pelvic floor dysfunction and routinely screens women with the St Mark's Vaizey faecal incontinence score for AI. Women ($n = 230$) were eligible for review if the referral was for antenatal and postnatal women (<6 weeks postpartum) (Fig. 1). Non-reproductive age women ($n = 22$) and non-contactable phone consults ($n = 36$) were excluded.

A systematic data collection tool was specifically developed to extract data from case-notes. Data collected included: demographics, obstetric history, primary reason for referral, assessment of AI and attendance to CNS appointment. All data were extracted from the case-notes by the same researcher (JT), with a 10% sample also extracted by another researcher (JD) to evaluate for repeatability and reproducibility.

Indication for primary referral was identified from the generic hospital referral within case-notes. Women are not routinely questioned about continence status by health care providers and referrals are often generated as a result of women initiating a concern. Referrals were completed by a primary health care provider at antenatal or postnatal contact. Referrals were actioned by CNS within 13 days of receipt. Referrals were grouped as urinary incontinence (UI), AI, UI and AI; other complaints. Other complaints included constipation, obstructed defecation, pelvic floor laxity and haemorrhoids.

Demographic details were included to describe the profile of the women. Age, previous pregnancies and births were collected to identify correlation to AI.

AI was defined as the involuntary loss of liquid, solid stool and flatus.[12] AI symptoms were identified by the CNS during initial phone consultation, utilising a validated assessment tool, the St Marks Vaizey faecal incontinence score (Vaizey score).[24] The Vaizey score consists of two scoring systems with a five point scale which evaluates type and frequency of solid/liquid stool loss, flatus incontinence and impact on quality of life.[24,25] Additionally, the Vaizey score addresses rectal urgency (no = 0 or yes = 4) and use of pad or constipating medications (no = 0 or yes = 2). The scoring system denotes continence (0/24) or incontinence (>0/24). The Vaizey score assesses AI symptoms over the past month; but given the variable history of AI in pregnancy and postnatal periods it is common practice for all CNS staff to omit the month timeframe.[10,18] If symptomatic, women were also asked whether they wished to be referred to a service which specialised in pelvic floor dysfunction (Fig. 1).

2.1. Statistical methods

Ten percent of data collection utilising the systematic data collection tool was assessed for inter-rater agreement reliability between the researcher (JT) and co-researcher (JD). The Kappa measure of agreement was utilised to estimate the proportion of agreement between researcher's findings. The Kappa Measure of Agreement value was 1.00, with a significance of $P < 0.0005$ and represents good agreement.

Descriptive statistics were utilised to describe the frequency of AI and its relationship to UI. The independent sample's t-test was used to compare means of continuous data between two groups. Categorical background data was compared utilising chi-square test. Mean or median scores where appropriate were derived for age, parity, Vaizey score. Statistical analysis was performed utilising statistical software package IBM SPSS version 20.0 (SPPS Inc., Chicago, Illinois, USA).