

CHARACTERIZATION OF COLORECTAL SYMPTOMS IN WOMEN WITH VESICOVAGINAL FISTULAS IN JOS, NIGERIA

Hypothesis / aims of study

Obstetric vesicovaginal fistulas (VVF) resulting from obstructed labor are a well-described problem in developing countries with limited access to obstetric care. Given the prolonged injury necessary to cause tissue necrosis and VVF in the anterior pelvis, we hypothesized that there would also be related neuromuscular/functional damage in the posterior pelvis, resulting in increased colorectal symptoms including fecal incontinence (FI). In the only prior study addressing this issue, 38% of 55 Ethiopian women presenting for vesicovaginal fistula repairs reported "altered fecal continence."^[1]

Study design, materials and methods

This is a case series from a two-week surgical service trip to Jos, Nigeria, in February 2010 in which we administered FI symptom and quality of life (QOL) questionnaires to women at Evangel Hospital undergoing care for obstetric VVF. The study population included all women at the hospital during this time period with a diagnosis of obstetric VVF on clinical examination. Women with concurrent rectovaginal fistulas (RVF) were excluded in order to evaluate the impact of tissue injury that fell short of causing an overt RVF. Subjects were interviewed in a private room and questionnaires were translated from English, the official language of Nigeria, to Hausa and other Nigerian dialects as necessary by one study nurse in the VVF Center.

Patients were asked to respond to baseline demographic questions, the Vaizey^[2] questionnaire to characterize fecal incontinence symptoms, the Colorectal-Anal Impact Questionnaire (CRAIQ)^[3] characterizing the impact of bowel symptoms on QOL, and whether or not they had symptoms of constipation. They were also asked to mark their personal sense of overall health on a 15 cm visual analog scale (VAS) between poor (0) and excellent (15). Data was analyzed using Excel and commercially available statistical software. Differences in VAS scores were compared using *t*-tests.

Results

Baseline characteristics. Demographics are described in Table 1. The 33 subjects who completed this study were from 21 tribes. Participants were a mean of 5.5 years out from their VVF injury (median 3, range 1 – 34). 28 (85%) had undergone at least one prior VVF surgery (range 0 to 6). 17 (52%) had at least one prior live vaginal delivery (range 0 to 10); 27 (82%) had at least one stillborn vaginal delivery (range 0 to 4), and 18 (55%) had at least one prior cesarean section (range 0 to 2). 14 (42%) VVFs occurred as a result of the first pregnancy (range 1 to 14). At the time of the survey, 23 (68%) subjects were currently leaking urine, 8 (26%) were dry, and 2 (6%) still had a Foley catheter in place following recent surgeries.

FI. 3 subjects (9%) endorsed leaking gas, with each having a total Vaizey score of 2. No subjects endorsed leaking solid or liquid stool, fecal urgency, alteration of lifestyle, need for protective pads or clothing, or the use of constipating medications. 16 subjects (48%) reported bothersome constipation.

QOL impact. 1 of the 3 subjects with flatal incontinence reported moderate depression and frustration related to her bowel symptoms on the CRAIQ. 4 (25%) of the subjects with constipation endorsed somewhat (n=2) or moderate (n=2) depression, and 1 also reported moderate frustration. No women with flatal incontinence or constipation reported any impact on activities (chores, physical activities, travel, or entertainment).

Overall health. The participants' average impression of overall health was 11 on a VAS from 0 (poor) to 15 (excellent), with scores ranging from 6 to 15. Average scores were lower in subjects leaking urine compared to those no longer leaking urine (10.3 vs 12.4, respectively; P = 0.16).

Age (years)	32* (18 – 50)
BMI (kg/m ²)	22.7* (16 – 36)
Height (inches)	60.0* (54 – 69)
Religion	
Christian	23 (69.7%)
Muslim	10 (30.3%)
Hypertension	1 (3.0%)
Diabetes	0
Malaria (active)	1 (3.0%)
Tobacco use	1 (3.0%)
Alcohol use	1 (3.0%)
Prior Hysterectomy	1 (3.0%)
Parity	2 [#] (1 – 14)
VVF Pregnancy	2 [#] (1 – 14)
Prior VVF Repairs	1 [#] (0 – 6)
Age at VVF	26* (16 – 48)

Table 1. Demographics

Values presented as Mean* (Range), Median[#] (Range), or n (%).

Interpretation of results

In this small study of women with isolated VVF, no subjects reported suffering from frank incontinence of liquid or solid stool. The prevalence of FI symptoms in this group of patients is lower than expected given the extensive damage to their anterior pelvis from prolonged obstructed labor, and is even lower than that reported in the United States where prolonged labor and VVF are much less common. This difference may be due to younger age in our subjects compared to population studies in the US, resolution of symptoms, a lack of willingness to share this potentially embarrassing information in the presence of an investigator and interpreter, or the fact that the questionnaires utilized were developed and validated in a US population of women, introducing a potential language barrier despite translation by capable personnel. Although we screened for subjects without RVF by asking "Do you or have you ever leaked stool from your vagina?" or by reading their hospital charts, our study was limited by language barriers and small numbers, and it is possible that we may have excluded some subjects presumed to have RVF who in fact had fecal incontinence.

Our finding of constipation in nearly half of this group of women is notable. While this may be due to neuromuscular damage around the rectum, it could also be caused by diet, activity level, or other factors. Further studies would be needed to characterize the extent of constipation as well as possible causes.

Health scores on the VAS for these women reflected a good impression of overall health. This may be somewhat surprising given the life-altering nature of continuous urinary incontinence along with its social and cultural consequences. Not surprisingly, the women leaking urine gave themselves a lower score than women no longer leaking urine, though not statistically significant.

An intriguing explanation for such limited posterior compartment symptoms may be related to the fact that these subjects in general are of very short stature and may have pelvic anatomy predisposing to anterior compartment injury.

Concluding message

In this population of women with VVF, we found a surprisingly low prevalence of fecal incontinence symptoms. If our results are representative, they suggest that despite a history obstructed labor resulting in a VVF, a curative VVF repair results in a high chance of leaving these women continent of urine and stool.

References

1. Murray C, Goh JT, Fynes M, Carey MP. Urinary and faecal incontinence following delayed primary obstetric genital fistula. BJOG 2002 Jul;109(7):828-32.
2. Vaizey CJ, Carapeti E, Cahill JA, Kamm MA. Prospective comparison of faecal incontinence grading systems. Gut 1999; 44:77-80.
3. Barber MD, Walters MD, Bump RC. Short-forms of two condition-specific quality-of-life questionnaires for women with pelvic floor disorders (PFDI-20 and PFIQ-7). Am J Obstet Gynecol 2005; 193:103-113.

<i>Specify source of funding or grant</i>	Partially supported by the National Institute of Diabetes and Digestive and Kidney Diseases DK068389
<i>Is this a clinical trial?</i>	No
<i>What were the subjects in the study?</i>	HUMAN
<i>Was this study approved by an ethics committee?</i>	Yes
<i>Specify Name of Ethics Committee</i>	University of Alabama Institutional Review Board
<i>Was the Declaration of Helsinki followed?</i>	Yes
<i>Was informed consent obtained from the patients?</i>	Yes