

PRIMARY OBSTETRIC FISTULA IN NIAMEY, NIGER: SURGICAL OUTCOMES IN 305 PATIENTS

Hypothesis/Aim of Study: To evaluate demographics, pre-operative physical examination, and surgical techniques used to treat women presenting to the National Hospital in Niamey, Niger for repair of primary obstetric fistula and to analyze prognostic potential of these factors on successful repair.

Study Design, Material and Methods: Retrospective chart review of 305 patients evaluated for primary obstetric fistula at the National Hospital in Niamey, Niger from December to March 2008. Demographics, pre-operative physical examination findings, surgical procedures and follow-up assessments were included in analysis. At follow-up the patients were evaluated for persistent fistula, stress urinary incontinence (SUI), detrusor instability (DI), mixed incontinence or considered a successful closure and dry.

Results: 305 women underwent primary fistula repair. 22 women were lost to follow-up. Of the remaining 283 patients, 78 women (27.6%) had persistent fistula and 205 (72.4%) women had successful closure of fistula. Of 205 women without fistula, 43 (21.0%) were diagnosed with SUI, 5 (2.4%) with DI, and 7 (3.4%) with mixed incontinence, and 150 (73.2%) were continent or dry. Median (range) follow-up was 2.5 (0.3 – 31.7) months in patients with persistent fistula compared to 1.2 (0.2 – 22.2) months in patients without fistula ($p < 0.0001$). Median (range) follow-up was 1.1 (0.2 - 13.2) months in patients who were dry compared to 2.6 (0.4 - 22.2) months in patients who had residual incontinence but a successful closure ($p < 0.0001$).

There was no significant difference in parity between patients with and without persistent fistula however those with residual incontinence had significantly lower parity compared to those with continence ($p < 0.0001$). There were no significant differences in mean age at first delivery and marital status between patients with repair success and patients with residual incontinence. Those patients who had a cesarean delivery were more likely to have a failed repair. Urethral length, fistula size (if the fistula did not involve the urethra), and scarring were not associated with successful closure. Patients who had successful closure and remained dry after primary repair had significantly fewer initial fistulas involving the urethra ($p < 0.0001$). Urethral length was found to be associated with residual incontinence. There was a trend toward increased severity of scarring in patients with residual incontinence as compared with those with repair success. Patients who had a successful closure were more likely to be classified as Type I and A, not involving urethral closing mechanism and without urethral involvement, than those with persistent fistula. Furthermore, residual incontinence was significantly associated with pre-operative classification of Type II, involving the urethral closing mechanism, and circumferential urethral damage. There was no significant difference in the number of closure layers between the two groups.

Interpretation of Results: 305 patients underwent primary fistula repair. 72.4% had successful closure of the fistula however 26.8% had residual incontinence at follow-up. Continued incontinence was secondary to SUI, DI and mixed incontinence. Cesarean delivery was not protective against failed repair. Successful repair was more likely for fistulas that did not involve the urethral closing mechanism or if the urethral fistula was small and not circumferential. Severity of tissue scarring trended toward an association with residual incontinence. Urethral involvement, urethral length and involvement of the urethral closing mechanism were prognostic factors for residual incontinence after successful closure.

Conclusion: Obstetric fistula is a common problem in Niger. Fistula repair is prone to recurrence, and many may continue to have profound urinary incontinence and/or voiding dysfunction after successful fistula closure. Successful closure and risk of residual incontinence after closure are directly related to the extent of urethral involvement, including size of the urethral fistula, the remaining urethral length, and involvement of the urethral closing mechanism.

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<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>	This study was deemed exempt by the Mount Sinai IRB
<i>Was the Declaration of Helsinki followed?</i>	Yes
<i>Was informed consent obtained from the patients?</i>	No