**189**

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# OBSTETRIC FISTULA AT THE GENERAL REFERRAL HOSPITAL OF PANZI, BUKAVU, DEMOCRATIC REPUBLIC OF CONGO: A RETROSPECTIVE REVIEW OF 216 PATIENTS

**Hypothesis/Aim of Study:** To provide a description of the epidemiological characteristics, diagnoses and treatment success of women presenting to the General Referral Hospital of Panzi, Bukavu, Democratic Republic of Congo (DRC) for treatment of obstetric fistula.

**Study Design, materials and methods:** This is a retrospective chart review of 215 patients evaluated for obstetric fistula at the General Referral Hospital of Panzi, Bukavu, DRC from April to December 2009. Demographic, pre-operative physical examination findings, fistula classification, surgical procedures and follow-up assessment were included.

**Results:** The majority of patients were from Kalemie, DRC (n=53) and the next largest group came from Burundi (n=32). Mean (± SD) age at presentation was 31.14 years ±13.22 years and mean age at first delivery was 19.0 years

Of the patients presenting for fistula evaluation 85 (40.5%) were primiparous 106 (50.2%) patients reported that the fistula developed after vaginal delivery, 79 (37.4%) developed after a c-section and 13 (6.2%) after a vacuum assisted vaginal delivery, VAVD. 6 patients had a fistula after hysterectomy. Overall, 157 (82.2%) reported at least one prior vaginal delivery and 41.2% of patients reported a previous cesarean section. 19 patients reported a history of sexual violence that did not appear to directly lead to fistula formation.

Information regarding a patient's first and last delivery was identified. In patients developing a fistula after their first delivery 93 (71.0%) had a vaginal delivery, 35 (26.7%) had a c-section and
3 (2.3%) had a VAVD. 66 (64.0%) delivered at a hospital and 36 (35.9%) delivered at home. 89.8% of patients labored 2 or more days and delivery resulted in a stillbirth for 77.5% of patients. In multiparous patients, the reported route of the last delivery was 47.7% vaginal and 46.8% cesarean section. Similarly for the last delivery, 76.2% labored for 2 or more days, 83.5% delivered at a hospital and there still was a high percentage of stillbirths, 76.6% (n=85). 62.7% (n=118) identified themselves as married, 19.1% (n=36) as separated, 9.6% (n=18) as widowed and 7.0% as single. 88.2% reported having intercourse and 45.3% report recent menstruation. 71.6% of patient reported no previous attempts at surgical fistula repair.

Of the 215 patients 180 had vesicovaginal fistula, 7 had uretero-vaginal fistula, 12 had utero-vaginal fistula and 16 had a rectovaginal fistula, of which 6 were isolated rectovaginal. Fistulas were classified using a dual classification system for future outcomes analysis. 198 (93.4%) had 1 fistula identified on examination. 87 (42.6%) fistulas involved the urethra and 42 of these had circumferential damage. Mild scarring was identified in 87 (43.5%) patients, a fistula size greater than 3 cm in 27 (14.8%) patients and a the distance of the fistula was found to be 1.5 to 2.5cm from the urethral meatus in 88 (47.3%) patients

153 (73.6%) of the fistula repairs were primary, 35 (16.8%) were secondary and 20 (9.6%) were a tertiary or greater repair. The majority of repairs were done in a single layer (97.0%, n=193). 26 (12.5%) fistula repairs were done abdominally; the remaining cases were completed vaginally.

Median follow-up time after repair was 14 days (range 7- 43 days). At the time of longest follow-up 180 patients (88.6%) had a successful closure of the fistula, 25 (12.3%) had a failed repair and 12 were lost to follow-up. However, 32 (15.8%) patients continued to have urinary leakage post-operative from SUI and 1patient had a persistent uretero-vaginal fistula.

**Interpretation of Results**: Obstetric fistula is a common problem in Democratic Republic of Congo. Most of the patients traveled from outside the region to seek care and presented for evaluation of their first fistula. Almost half the fistulas involved the urethra and half of those which involved the urethra had circumferential damage. The overall closure rate was similar to previously published studies as was the rate of residual urinary incontinence.

**Concluding Message:** Obstructed, unmonitored labor is the primary risk factor for childbirth fistula in both young primiparous and older multiparous women in the Eastern region of Democratic Republic of Congo. The high percentage of fistula after c-section suggests the need for increased training in operative delivery. Fistula repair is prone to recurrence, and many will continue to have profound urinary incontinence after successful repair. Short term results of single layer repair via Addis Ababa Fistula Hospital technique shows a high primary repair successful closure rate of 89%. Continued follow-up is needed to determine the longevity of this technique.

| | **No. of Patients (%)** |
|---|---|
| **Mean age at presentation** | 31.14 (std dev 13.22) |
| **Parity, n=210** | |
| 1 | 40.5% 85 (40.5%) |

| | |
|---|---|
| 2 | 137 (17.6%) |
| >/= 3 | 84 (n=40.0%) |
| **No. of living children, n=210** | |
| 0 | 105 (n=50.0%) |
| 1 | 48 (22.9%) |
| 2 | 17 (8.1%) |
| >/=3 | 40 (19.0%) |
| **Mode of Delivery, n=211** | |
| Vaginal delivery | 106 (50.2%) |
| C-section | 79 (37.4%) |
| VAVD | 13 (6.2%) |
| Other: symphisotomy, curettage, hysterectomy | 6.2% (n=13) |
| **Type of fistula, n=204** | |
| Vesicovaginal | 93 (45.6%) |
| Urethro-vaginal | 87 (42.6%) |
| Uretero-vaginal | 7 (3.5%) |
| Utero-vaginal | 12 (6.0%) |
| Rectovaginal | 16 (7.9%) of which 6 isolated RVF |
| **Type of Repair, n=208** | |
| Primary | 153 (73.6%) |
| Secondary | 5 (16.8%) |
| Tertiary or greater | 20 (9.6%) |
| **Outcome, n=203** | |
| Fistula closed | 180 (88.6%) |
| Residual Incontinence | 32 (15.8%) |


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|---|---|
| ***Specify source of funding or grant*** | **None** |
| ***Is this a clinical trial?*** | **No** |
| ***What were the subjects in the study?*** | **HUMAN** |
| ***Was this study approved by an ethics committee?*** | **Yes** |
| ***Specify Name of Ethics Committee*** | **This study was deemed exempt by the Mount Sinai IRB** |
| ***Was the Declaration of Helsinki followed?*** | **Yes** |
| ***Was informed consent obtained from the patients?*** | **No** |