

## Abstract

# Vesicovaginal Fistula (VVF) Repair Improves Mental State of Japanese Patients with Iatrogenic Vesicovaginal Fistula

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**Objective:** Obstetric fistulae are reported to occur frequently during childbirth in developing countries, and it is reported that 30 thousand to 130 thousand cases of fistulas per year occur in Africa alone. In the previous study, 70% of Kenyan vesicovaginal fistula (VVF) patients have a depressive tendency and 20% of Kenyan VVF patients have a history of suicide attempt. There is also a report that surgical treatment of obstetric fistula results in marked improvements in Ethiopian VVF patients' mental health.

However, fistulae as seen in the developed countries are few and known to follow hysterectomy. Japan has also seen very few cases of VVF (0.1% of total hysterectomy), and it is estimated that about 100 cases occur annually. Because the incidence of VVF is low, there have been no reports of Japanese VVF patients' mental health. The objective of this study was to clarify the effect of vesicovaginal fistula (VVF) repair on the mental state among the Japanese VVF patients.

**Methods:** A retrospective chart review was performed on 29 Japanese women who underwent VVF repair at our clinic. Patients were evaluated for their urination and mental state using two questionnaires such as the International Consultation on Incontinence Questionnaire-Short Form (ICIQ-SF) and the Hospital Anxiety and Depression Scale (HADS, a validated tool for detecting anxiety and depression in a non-psychiatric outpatient population) at baseline and 3 or 6 months following surgery.

**Results:** The patients' median age and median duration of the problem were 45 (35-60) years and 11 (4-115) months, respectively, and 12 patients (41.4%) underwent on hysterectomy for malignancy. Surgical procedures included 27 cases of transvaginal VVF repair (93.1%) and 2 cases of transabdominal VVF repair (6.9%). All subjects had no urine leakage due to fistula after repair.

Scores of each questionnaire improved as follows. ICIQ-SF: from 20(3-21) points to 0(0-11) point ( $P<0.01$ ); HADS-Anxiety score: from 8(2-17) points to 4(0-15) points ( $P<0.01$ ); and HADS-Depression score: from 8(0-17) point to 4(0-13) point ( $P<0.01$ ). Compared between pre- and post-operation, prevalence of clinical anxiety (HADS-Anxiety score:  $\geq 8$ ) from 55.2% to 17.2% ( $P<0.01$ ) and clinical depression (HADS-Depression score:  $\geq 8$ ) decreased from 51.7% to 13.8% ( $P<0.01$ ). None of the subjects had received treatment interventions from psychiatrists and other experts of mental disorders at any phases.

**Conclusions:** It was demonstrated that iatrogenic VVF patients had severe mental disorders preoperatively and VVF repair improved anxiety and depression symptoms dramatically.