Obstetric Fistula: Burden, Surgical Outcomes and Quality of Life of Patients in Zambia

ABSTRACT

Background: Obstetric fistula remains a significant maternal health concern in sub-Saharan Africa (SSA) including Zambia, with limited evidence on the contribution of iatrogenic causes. Evidence gaps persist regarding its prevalence, surgical outcomes, associated factors, and quality of life (QOL) following repair. This study investigated these gaps in Zambia while examining the contribution of iatrogenic causes to obstetric fistula in sub-Saharan Africa (SSA) as an emerging regional concern.

Methods: The study comprised three complementary components: (i) a systematic review and meta-analysis to estimate the proportion of iatrogenic obstetric fistula in SSA (ii) a retrospective review of fistula cases from nine repair facilities in Zambia (2018–2023), using Bayesian hierarchical modelling to estimate geographical prevalence; and (iii) a prospective cohort study to assess surgical outcomes, associated factors and changes in QOL six months after fistula repair.

Results: Iatrogenic fistulas accounted for 44% (95% CI: 37–51%) of obstetric fistulas in SSA, with non-specialists performing 92% of antecedent procedures in the three studies that reported on the provider of the procedure. In Zambia, the estimated prevalence was 0.28 per 1,000 births (95% Crl: 0.25–0.35), with marked geographical disparities across the 116 districts. Fifteen districts recorded no cases, while Chama district reported the highest estimated prevalence at 2.48 per 1,000 births (95% Crl: 1.24–4.89). Approximately 30% of women developed fistulas as adolescents. Surgical repair success rate was 78.8% at discharge and 83.5% among women assessed at six months. Facility-based delivery, caesarean delivery, and first-time repair were associated with successful outcomes. Obstetric fistula profoundly and adversely affected women's QOL, while successful repair was strongly associated with improvement in QOL.

Conclusion: Iatrogenic injuries account for a substantial proportion of obstetric fistula in SSA, underscoring the need to strengthen surgical skills supervision and quality assurance in obstetric care. In Zambia, geographical disparities in fistula burden highlight the need for targeted prevention and improved access to care in underserved districts. Although surgical repair achieves favourable outcomes. Successful repair by skilled fistula surgeons and integration of psychosocial support into fistula care are essential to optimise long-term outcomes and QOL.