

Hospital Course And Outcome For Patients With Anorectal Malformations (Bucket-Handle Deformity)

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Abstract

Anorectal malformations are some of the most common structural congenital malformations treated by pediatric surgeons globally. A bucket-handle deformity is a subtype of it characterized by a subepithelial midline raphe fistula. The etiology has not been fully understood but it is more likely to be multifactorial; genetic and environmental factors implicated. The outcome of surgery depends on the clinical presentation, early diagnosis, other associated malformations; surgeon's expertise and a postoperative follow up care. To analyse and evaluate pediatric patients with Bucket-handle deformity in terms of their hospital course (insight into the pre, peri and post-operative course).

This study was done at Khartoum North Teaching Hospital in Khartoum; Sudan. The targeted population were all pediatric patients with this deformity in our pediatric surgery department. Data was collected using a data collection sheet filled by the in-charge surgeon in the period from (March 2016 - March 2019).

In 72 pediatric patients with Bucket-handle deformity included, 39 (54.2%) were males and 33 (45.8%) were females. The mean age for patients was 2.28 years and 2.3 years at the time of surgery. When it comes to their gestational age at time of delivery, almost of them (82%) were born at term and about (16.7%) were preterm and only a small fraction (1.4%) were post-term. Ten patients (13.9%) have other anomalies that mainly cardiac and only 3 (4.2%) have an associated family history of congenital anomalies. Only 9.7% of patients were septic on admission and they had a slightly longer pre-operative and post-operatively hospital course when compared to non-septic patients. The average number of days patients stayed in hospital pre-operatively was 6.56 days and 10.72 days post-operatively. Overall, there was no post-operative complication of urinary or fecal incontinence and there was no constipation in the 6 months period following the surgery.

This 3-year cross-sectional study was undertaken at the pediatric surgery department in Khartoum North Teaching Hospital, Khartoum state; Sudan between March 2016 and March 2019 for all pediatric patients with Bucket-handle deformity admitted to the department. The participants were all pediatric patient with Bucket-handle deformity in the pediatric surgery department in Khartoum North Teaching Hospital the period (March 2016 - March 2019). Data was collected using data collection sheet (Appendix 1) by the in-charge surgeon. Statistical analysis was performed using the Statistical Package for Social Science (SPSS, Version 23). Results were expressed as tables. The ethical approval was obtained from the local ethical committee at Khartoum North Teaching Hospital.

A total of 72 children were managed for anorectal malformation (Bucket-handle deformity) during the period (2016-2019) were included, as expected we have a slightly increased number of male patients constituting 39 patients (54.2%) when compared to females, 33 patients (45.8%). The majority of patients involved in the study were born at home (76.4%) and around the same percentage (77.8%) were born vaginally. When it comes to their gestational age at time of delivery, almost (82%) were born at term and about (16.7%) were preterm and only small fractions (1.4%) were post-term. Anorectal malformations (ARM) include a wide spectrum of congenital defects with variable clinical presentations and outcomes, which represent a variety of diagnoses in which patients do not have a normal anal opening but instead, they have a fistulous tract that opens onto the perineum anterior to the anal muscle complex or into adjacent anatomical structures. It can be associated with urinary or gynaecological fistulas and can often present as part of a genetic syndrome. These defects may be isolated or may present with other associated congenital anomalies. Anorectal malformations are some of the most common structural congenital malformations treated by pediatric surgeons globally. This study showed that all pediatric patients with Bucket-handle deformity in the pediatric surgery department at Khartoum North Teaching Hospital had good surgical outcome with no post-operative complications despite having a relatively long pre-operative and post-operative hospital course.

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