

Paediatric Day-Case Surgery in a New Paediatric Surgical Unit in Northwestern Nigeria

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Abstract

Background: Day-case surgery is defined as when the surgical day-case patient is admitted for investigation or operation on a planned non-resident basis and who nonetheless requires facilities for recovery. A significant number of our patients were treated as day cases. This study was conducted to audit paediatric day-case surgery practice at our centre, to determine the indications as well as morbidity and mortality from day-case surgeries. **Patients and Methods:** This is a prospective study over a period of 14 months. The patients scheduled for surgeries were assessed in the paediatric surgical outpatient clinic and information obtained for each of the patients included age, sex, diagnosis, type of operation, type of anaesthesia and post-operative complications. The data were analysed using SPSS version 15.0 for windows. **Results:** A total of 182 patients were operated during the study period. The age range of patients was 0.5–156 months and the mean age was 46.6 months. There were 152 male patients (83.5%) and 30 female patients (16.5%). Most of the patients had intact prepuce for circumcision (34.1%). Two patients who had herniotomy developed superficial surgical site infections which were managed as outpatients. There were no readmissions or mortality. **Conclusion:** Intact prepuce for circumcision as well as hernias and hydroceles is the most common day cases in our centre and is associated with low morbidity and no mortality.

Keywords: Day-case, paediatric, surgical

INTRODUCTION

Day-case surgery is defined as when the surgical day-case patient is admitted for investigation or operation on a planned non-resident basis and who nonetheless requires facilities for recovery.^[1-3]

Day-case surgery has many advantages including reduction in waiting time, lowered cost of hospitalisation, reduced risk of hospital-acquired infection as well as the psychological and emotional impacts arising from inpatient admission.^[1-5]

Children are generally excellent candidates for day-case surgeries as they are usually healthy and free from systemic disease or degenerative changes common with older patients.^[6]

Our centre has a new paediatric surgical unit established in January 2015. A significant number of our patients were treated as day cases since the inception of the unit. This has allowed for the treatment of a large volume of patients considering the fact that there is no dedicated paediatric surgical ward, with only four inpatient beds available for admission of children with surgical conditions irrespective of the admitting subspecialty.

This study was conducted to audit paediatric day-case surgery practice at our centre, to determine the indications as well as morbidity and mortality from day-case surgeries.

PATIENTS AND METHODS

This is a prospective study over a period of 14 months (April 2015–June 2016).

The patients scheduled for surgeries were assessed in the paediatric surgical outpatient clinic. Information obtained in pre-defined pro formas included age, sex, diagnosis and type of operation, type of anaesthesia and post-operative complications.

Consent was obtained from the parents and their willingness and ability to offer post-operative care at home were ensured.

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Patients were included if their baseline haematocrit was 30% or above with a normal blood chemistry and if they were to undergo a short surgical procedure with minimal blood loss and post-operative pain.

All patients with comorbidities, for example, bleeding disorders, haemoglobinopathies, asthma, cardiac anomalies and respiratory tract infections were exempted.

The data were analysed using SPSS version 15.0 for windows (SPSS Inc, Chicago, IL).

RESULTS

A total of 182 patients were operated during the study period. The age range of patients was 0.5–156 months, with a mean age of 46.6 months (3.9 years).

There were 152 male patients (83.5%) and 30 female patients (16.5%), with a male-to-female ratio of 5.1:1.

Most of the patients (34.1%) had intact prepuce for circumcision followed by hernias and hydroceles (27.5%) [Table 1].

Circumcision was the most common procedure performed, while inguinal herniotomy was indicated 55 times. Four patients had bilateral herniotomy and one patient had both herniotomy and orchidopexy [Table 2].

Choice of anaesthesia was based on the type of procedure and age of the patient with most patients having general anaesthesia [Table 3]. Local anaesthesia was used for circumcision for infants, whereas most patients who had rectal biopsy were done under conscious sedation.

Two (1.1%) patients who had herniotomy developed superficial surgical site infections which were managed as outpatients. There were no readmissions or mortality.

DISCUSSION

Paediatric day-case surgery is still evolving in our centre, and we do not have a dedicated day-care unit or ward. However, day-case surgery is an established practice in some centres in Nigeria.^[1,7]

We were able to demonstrate male preponderance similar to what was found in other studies.^[1,8,9]

The most common indication for day surgery in our centre was intact prepuce for circumcision, followed closely by hernias and hydroceles; this is in contrast to similar studies done in other parts of Nigeria, where hernias and hydroceles were found to be the most common indications for day surgery.^[1,8] However, one report found circumcision to be the most common outpatient procedure in children.^[10]

Most of our patients had their surgery done under general anaesthesia as was reported in other studies.^[1,10]

Our complication rate of 1.1%, with no readmissions and no mortality, is generally comparable with findings in most

Table 1: Indication for day-case surgery

Diagnosis	Frequency (%)
Intact prepuce for circumcision	62 (34.1)
Hernias and hydroceles	50 (27.5)
Hirschsprung's disease	17 (9.3)
Labial agglutination	14 (7.7)
Superficial lesions (lipoma, dermoid cyst)	9 (4.9)
	8 (4.4)
Undescended testis	7 (3.8)
Umbilical/paraumbilical hernia	3 (1.6)
Superficial abscess	3 (1.6)
Ankyloglossia	2 (1.1)
Thyroglossal cyst	2 (1.1)
Lymphadenopathy	2 (1.1)
Meatal stenosis	1 (0.5)
Polydactyly	1 (0.5)
Sexual assault	1 (0.5)
Urethral prolapse	1 (0.5)
Total	182 (100)

Table 2: Frequencies of procedures performed

Procedure	Frequency (%)
Circumcision	62 (33.2)
Herniotomy	55 (29.4)
Rectal biopsy	17 (9.1)
Separation of synechiae	14 (7.5)
Excision	12 (6.4)
Orchidopexy	8 (4.3)
Umbilical/paraumbilical hernia	7 (3.7)
Incision and drainage	3 (1.6)
Release of tongue tie	3 (1.6)
Sistrunk procedure	2 (1.1)
Meatotomy	2 (1.1)
EUA	2 (1.1)
Total	187 (100)

Table 3: Type of anaesthesia

Type of anaesthesia	Frequency (%)
General anaesthesia	117 (64.3)
Local anaesthesia	45 (24.7)
Conscious sedation	20 (11.0)
Total	182 (100)

other reports and has been attributed to careful patient selection.^[1,7-10]

CONCLUSION

Intact prepuce for circumcision as well as hernias and hydroceles is the most common day cases in children in our centre and is associated with low morbidity and no mortality.

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Conflicts of interest

There are no conflicts of interest.

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