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Review Article

Surgical Waiting List in Children: Experience in a Middle Income Country

Kevin Emeka Chukwubuike¹

¹ Pediatric Surgery Unit, Department of Surgery, Enugu State University Teaching Hospital, Enugu, Nigeria.

*Corresponding author

Kevin Emeka Chukwubuike,
Department of Surgery,
Enugu State University Teaching
Hospital, Enugu, Nigeria.
Email: chukwubuikeonline@yahoo.com

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Abstract

Background: It can be emotionally stressful for parents when they are waiting for surgery for their children. The aim of this study was to evaluate the surgical waiting lists of children for non-urgent pediatric general surgical procedures.

Materials and Methods: This study was based on evaluation of the waiting list of children for pediatric general surgery service in a tertiary hospital in Enugu, Nigeria. Parents/caregivers' perception of the waiting list was also assessed through a questionnaire during clinic visits.

Results: About 90% of the parents responded to the questionnaire. Three-quarters of the patients were male and their mean age was 9 months. Hydrocele and inguinal hernias were the most common clinical diagnoses in the waiting list. Most of the children have waited for surgery for more than 9 months and majority of the parents were dissatisfied with the long waiting period.

Conclusion: Long pediatric waiting list is a problem in middle income country like Nigeria. We recommended that accurate and reliable information be maintained about waiting list so that important decisions can be taken on patients' prioritization.

Keywords: Children, experience, middle income, surgical, waiting list.

Introduction

Waiting for an operation for their children can be emotionally challenging for parents and this long waiting process gives a bad image to the health care system [1]. The frustration of the parents stems from the dissatisfaction due to long waiting times for surgical operations [1]. Parents and caregivers value timely surgical care of their children and wards. Surgical wait lists in children are basically not monitored: Among the children waiting for surgery, the decision on which surgery should come first lies solely on the individual surgeons [1]. The timelines of surgical care may or may not correspond to the severity of the patients' condition and may vary from one practitioner to another [2]. The consequence of prolonged wait time includes continued suffering, emotional distress and parental loss of man-hours while taking care of their children [2]. Some authors have suggested the provision of sufficient number of nurses and physicians, appropriate healthcare resources, more operating rooms as the requirements to reduce long waiting time [2]. In order to ensure proper development of children, treatments should be offered

promptly and at critical times [2]. There has been little published about children waiting for elective surgical operations in Nigeria. The aim of this study was to evaluate the surgical waiting lists of children for non-urgent (elective) pediatric general surgical procedures.

Materials and Methods

This study was based on pediatric general surgery service in a tertiary hospital in Enugu, Nigeria. The tertiary hospital serves a population of about 4 million people and a population density of 616.0/km²: This is according to the 2016 estimates of the National Population Commission and Nigerian National Bureau of Statistics. The hospital also receives referrals from its neighboring states. For the purposes of this study, waiting period starts from the time when the patient's parent/caregiver and pediatric surgeon agreed on a treatment plan. A surgical waiting list is created and maintained by the pediatric surgeon and resident doctors. The waiting list in our centre is unaudited and the decision on which of the patients to operate on lies with the consultant pediatric surgeon. How long the patients have awaited

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for surgery was determined by evaluation of the waiting list. Only elective surgeries were included. Emergency and urgent surgeries were excluded from this study. Patients for elective surgeries are children who require surgery but their condition do not pose an immediate threat to their health or life. The determination of elective and emergency cases was based on the surgeon's judgment; that at the time of assessment the risk of an adverse event while waiting was not greater than those already on the waiting list. On a scale of one to ten, parents were asked to rate how urgent they felt the child needed the operation. The score of one represented the least while the score of ten represented extremely the need (just short of an emergency). Opinions of the parents were also sort on the maximum time they thought they could wait before getting the child's operation done. Data was collected in a proforma containing age, gender, duration of symptoms before presentation, clinical diagnosis, waiting interval, scale of parental perception of surgery urgency. Information was obtained from the parents through a questionnaire issued to parents during an outpatient visit. This study covered a period of 3 years, from January 2018 to December 2020.

Results

Patients' demographics:

There were 192 questionnaires issued to the parents but 172 (89.6%) were completely filled, returned and formed the basis of this report. The demographic profiles of the patients are shown in Table 1.

Table1: Demographic profiles of the patients (n=172)

Parameter	Value (%)
Mean age	9 months (1 month - 9 years)
Age group of the patients	
Neonate (less than one month)	3 (1.7%)
One month to 24 months	111 (64.6%)
Older than 24 months	58 (33.7%)
Gender	
Male	129 (75%)
Female	43 (25%)
Mean duration of symptoms before presentation	5 months (1 week - 2 years)

Clinical diagnosis:

The diagnoses are depicted in Table 2.

Table 2: Clinical diagnosis

Diagnosis	Number of patients (%)
Communicating hydrocele	58 (33.7)
Inguinal hernia	54 (31.4)
Symptomatic umbilical hernia	26 (15.1)
Undescended testis	20 (11.6)
Neck masses	14 (8.2)

Waiting period:

The waiting period of the patients are shown in Table 3.

Waiting period (in months)	Number of patients (%)
< 1	12 (7.0)
1 – 3	21 (12.2)
4 – 6	32 (18.6)
7 – 9	52 (30.2)
>9	55 (32.0)

Scale of parental perception of surgery urgency (1 to 10).

This is shown in Table 4.

Table 4: Shows the parental perception of the urgent need for surgery

Score	Number of parents (%)
5	32 (18.6)
6	28 (16.3)
7	51 (29.7)
8	12 (7.0)
9	22 (12.7)
10	27 (15.7)

Discussion

It is a stressful moment for parents when a diagnosis requiring surgical intervention is made on their children and this is made worse by the long wait time before surgical treatment [3]. Negative social consequences and lower quality of life have been associated with long wait times [4]. Studies have shown that treatment outcome is adversely affected by prolonged waiting [5]. In Canada, the Canadian Pediatric Surgical Wait Times (CPSWT) Project was formed for timely access to pediatric surgeons and subsequent treatment [2].

About 90% of the parents/caregivers responded to the questionnaire. This is in contrast to the findings of Miller et al [1]. The fact that we administered our questionnaires during the clinic visits, not through post, may be responsible for the higher response rate. The parents may believe that responding to the questionnaires during clinic visits may increase the chances of their children being operated on. In the present study, the least number of children were neonates. Vileito et al also reported the low number of neonates in their waiting list [6]. The preference of pediatric surgeons to operate early on neonates and the low incidence of elective pathologies in neonates may explain the few numbers of neonates on the waiting list. The mean age of the children on the waiting list may be related to the predominant pathology in the children. The mean age of 9 months recorded in the current study may be explained by the fact that inguinal hernias and hydroceles are more common in infants [7]. There were more males than females in the waiting list in the index study. Scarlett et al in their series also reported male predominance on their waiting list [8]. The clinical diagnosis in the patients may explain this male predominance. For instance, hernias and hydroceles are more common in males. The mean duration of 5 months before the patients were brought to the hospital may reflect the lack of awareness and paucity of funds on the part of the parents.

Hydroceles and hernias were the most common clinical diagnosis in the children on the waiting list. The hydrocele here refers to communicating hydrocele. Other types of hydroceles

such as encysted hydrocele of the cord may resolve without surgical treatment. One study from Canada also reported hydroceles and inguinal hernias as the most common pathologies why children wait on the waiting list [1]. Hydroceles and hernias are the common clinical problems in children and they are the most commonly performed pediatric surgical procedure [9]. The low incidence of neck masses in the waiting list may be due to their relative rarity when compared to pediatric hernias and the prompt treatment of neck masses in children. Umbilical hernias may resolve spontaneously in children. However, when symptoms develop (symptomatic umbilical hernia), it is an indication for surgery.

The majority of the children have waited for surgery for an upwards of 9 months. This long waiting time may be reflective of the paucity of pediatric surgeons, high patient load in low income countries and lots of pediatric surgical emergencies that are given preference over elective surgeries. Poverty, irregular clinic visits and anxiety on the part of the parents may have also affected the waiting time.

On the assessment of the parental perception, most of the parents were not satisfied with the waiting period. The parents felt that the surgical pathology their children had were causing the children pain, discomfort and absenteeism from school. About one-tenth of the parents expressed their concern that their children's problems were near emergencies. Although parental perception is an important consideration in treating children, the judgment and decision of the surgeon is paramount and should be communicated to the parents/caregivers.

Conclusion

About 90% of the parents responded to the questionnaire on their concerns about their children who are waiting for elective surgery. More male children were on the wait list. Hernias and hydroceles were the most common clinical diagnosis in the children. Long pediatric waiting list is problem in low/middle income country like Nigeria. We recommended that accurate and reliable information be provided about waiting list so that important decisions can be taken on patients' prioritization.

Recommendation

To solve the problem of long waiting list, we recommend the following:

Due to the paucity of pediatric surgeons and their uneven distribution mainly in the urban areas, more surgeons should be trained in pediatric general surgical practice. This will ease the load of patients on the waiting list. The practice of pediatric general surgery entails the pediatric surgeon managing both the major and minor cases.

References

1. Miller GG. Waiting for an operation: parents' perspectives. *Can J Surg.* 2004; 47(3): 179-181.
2. Wright JG, Li K, Seguin C, Booth M, Fitzgerald P et al. Development of pediatric wait time access targets. *Can J Surg.* 2011; 54(2): 107-110.
3. Arunalanandan Brandan. The burden of waiting: wait times for pediatric surgical procedures.
4. Oudhoff JP, Timmermans DR, Knol DL, Bijnen AB, van der Wal G. Waiting for elective general surgery: impact on health related quality of life and psychosocial consequences. *BMC Public Health.* 2007. 7: 164.
5. Hrivatakis G, Astfalk W, Schmidt A, Hartwig A, Kugler T, Heim T et al. The timing of surgery for undescended testis-a retrospective multicenter analysis. *Dtsch Arztebi Int.* 2014; 111(39): 649-657.
6. Vileito A, Hulzebos CV, Toet MC, Baptist DH, Verhagen AA et al. Neonatal donation: are newborns too young to be recognized? *Eur J Pediatr.* 2021; 6(1): 1-7.
7. Ravikumar VSR, Kumar HR, Gowda MRN. A clinical study on the management of inguinal hernias in children on the general surgical practice. *J Clin Diagn Res.* 2013; 7(1): 144-147.
8. Scarlet M, Crawford-Sykes A, Thomas M, Duncan ND. Paediatric day surgery: revisiting the University Hospital of the West Indies experience. *West Indian Med J.* 2007; 56(4): 320-325.
9. Kapur P, Caty MG, Glick PL. Pediatric hernias and hydroceles. *Pediatr Clin North Am.* 1998; 45(4): 773-789.