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Original Article

Cancellations of elective operations-causes in pediatric patients

Mansoor Mahmood, Nadeem Akhter, Shazia Yousaf, Saqib Ismail, Israr Zahir,

M. Zaheer Abbasi

Department of Pediatric Surgery, Pakistan Institute of Medical Sciences, Islamabad, Pakistan

ABSTRACT

Objective

To detrmine the causes of cancellation of elective surgical patients in pediatric patients.

Patients and Methods

This retrospective study was conducted in the department of pediatric surgery; the children's hospital PIMS Islamabad. All scheduled patients for elective surgeries over a period of one year from 1st January 2010 to 31 December 2010 were enrolled. Proportion of surgery obtained each day from the operating list and a separate list of additions and cancellations compiled on the day; reasons for cancellations from the cancellation list, extended or confirmed, from operation theater daily record register.

Results

A total of 3240 cases were scheduled to undergo elective surgeries and 464 (14.3%) were cancelled. The highest number of cancellation occurred due to URTI and fever (24.2%). The least cause of cancellation was due to refusal from surgery by parents (1.3%).

Conclusions

There were three major reasons for on the day surgery cancellations. We estimated that 40% of elective procedures were potentially avoidable. (Rawal Med J 2011;36:199-201).

Key Words

Elective surgical patients, causes of cancellations, pediatric.

INTRODUCTION

Cancellation of elective pediatrics surgical patients ranged from 10-40% in most hospitals. [1-3] This results in wasting operating room time, prolonging the duration of patient hospitalization and resulting in additional expenses to hospital and patients.[4] Also, this delay causes inconvenience to patients and their families with prolongation of the period of fear that the patients normally feel before surgery.[5] The fear of a possible operation is felt, even before the patient undergo investigations and receives diagnosis.[6] Surgical interventions evoke strong psychological and psychosocial reactions connected with thoughts about death, pain and risk of complications.[7] The reasons for cancellation of the elective pediatric surgery include respiratory tract infections, anemia, and lack of beds at intensive care unit, shortage of time, incomplete preoperative investigations and disruption of the operation program by emergency operations, patient non-arrival and cancellation by patient or relatives.[8,9] The aim of this study was to determine the reasons for cancellations of pediatrics surgical procedures at our institution.

PATIENTS AND METHODS

This retrospective study was carried out in the Department of pediatric surgery, Children's Hospital Pakistan Institute of Medical Sciences (PIMS), Islamabad, Pakistan from January 2010 to December 2010. The children operation theatre complex has five operating rooms. All are available from 8 AM to 2 PM from Monday to Saturday. The operation theatre list is submitted on or before 2 PM the previous day. Any emergency addition to the list is allowed. The theatre list provides patient and surgeon details, intended procedure and estimated duration of each operation.

After an operation, details are entered into an operating theatre database and passed to the hospital patient information system. From this, we obtained patient demographic characteristics, morbidity, category (ward, day-of-surgery, day-only or emergency admission), and date and actual time of start and end of surgery. A cancellation on the day of intended surgery was defined as any operation that was either scheduled on the final theatre list for that day or was subsequently added to the list, and that was not performed on the day. The cancellation rate was calculated from the OT formats at the end of month and reasons for cancellation were mentioned in OT cancellation spectrum.

RESULTS

During the study period, a total of 3240 elective surgical procedures were scheduled and out of these, 2776 (85.7%) procedures were performed according to schedule. However, 464 (14.32%) of the scheduled procedures were cancelled. Main reasons for cancellations were upper respiratory tract infections (URTI) (n=112, 24.2%), low hemoglobin (n=94, 20.3%) and non availability of ventilator and intensive care bed (n=87, 18.7%) (Table 1).

Table 1. Reasons of cancellation of surgery N=464

Reasons of cancellation	**Frequency**
Upper respiratory tract Infections	112(24.2)
Anemia	94(20.3)
Non-availability of ventilator and intensive care bed	87(18.7)
Shortage of operating surgeon	38(8.2)
Shortage of operating time	26(5.6)
Medically unfit patients	30(6.4)
No-show by patient	23(4.9)
Patient not fasting	11(2.4)
Precedence of emergency cases	18(3.8)
Refusal from surgery	6(1.3)
Non-availability of blood	11(2.4)
Equipment out of order	8(1.7)

Out of these we estimated that 40% of cancellations were potentially avoidable.

DISCUSSION

Cancellation results in extremely negative feelings in some patients while others conceal their sadness.[10] Many retrospective and prospective studies have revealed various reasons for cancellations and have reported the rate of cancellation from 10 to 40%.[11] A study from from Australia reported cancellation rate of 7.2% of all scheduled operations.[12] This study found medically unfit patient; operation found not necessary; postponement due to patient condition; and patient failure to attend/late as the four most common reasons for cancellations.[12] Most common reason for cancellation in our study was URTI. This is one of the most controversial issues in pediatric anesthesia.[13] Many studies support that children with URTI should get their surgery postponed till they are asymptomatic. [14,15] Unfortunately there is no consensus on the optimal time to wait before surgery is rescheduled.[16,17] although for certain population there appears to be no increased risk and case can be managed with minimum morbidity.[18] The literature supports selective cancellation of surgery for these children.[19]

Cancellation rate of these children with URTI was high (24.2%) in our study when compared to data found in a national survey. [20] Another common reason for cancellation was due to list overrun (short of time). The surgeons took longer than the anticipated surgical time. This was more common with few surgeons who repeatedly underestimated the expected time and hence cancellation rate was much higher with them. Similar finding has been reported as one of the most common reason for cancellation of surgery.[21] It is important as different surgeons may take different time for same procedure. Also it must be considered that sometimes surgeon may encounter different than anticipated or complex surgical findings necessitating change of surgical procedure leading to longer surgical time. Improved methods of booking and allocating theatre time and operating room technique for patient flow can be used for quality improvement.

In order to avoid scheduling of medically unfit patients in the elective list, good preoperative evaluation is required to be done by an experienced anesthesiologist.[22] Due to theatre time constraints, sometimes surgeons used their discretion to accommodate a semi-emergency surgery like malignancy after deferring a planned case. Such cases take a priority over elective cases but disrupt an elective list. Sometimes patients do not turn up or deny consent for surgery at the last minute leading to cancellation. Most surgical centers in the West levy fee for cancellation of

elective surgery.[23,24] However, we can reduce this by proper communication with the parents. On many occasions, the investigations recommended by anesthesiologists are not done leading to cancellation. Sometimes parents may give feed to the child in the morning of surgery despite clear instructions by an anesthesiologist and the nursing personnel. Non-availability of blood for major surgery is an avoidable cause of cancellation. Surgeons should ensure that adequate necessary blood products suggested by an anesthesiologist in-charge are arranged. Sometime it may become necessary to release the reserved blood for some other patient as a life-saving measure resulting in non-availability of blood or blood products for an elective case posted next morning.

CONCLUSION

This study showed that the most common reasons for the cancellations of elective pediatric surgical procedures were URTI, low hemoglobin and non availability of ventilator and intensive care bed. One should aim to prevent or minimize cancellation by careful planning and making protocols to use the resources optimally and avoid financial loss and psychological trauma to the parents and patients.

Correspondence: Dr Nadeem Akhter. chpims@hotmail.com

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