Reasons for Elective Surgery Cancellation in a Referral Hospital

HA Ezike, VO Ajuzieogu and AO Amucheazi
Department of Anesthesia
College of Medicine, University of Nigeria, Enugu

Abstract

Background: Case cancellation can be very distressing not only to the patient and relatives but also to health care professionals.

Objectives: This study aims at detecting the causes of case cancellations on the intended day of surgery (DOS) at a tertiary hospital in Enugu that handles both elective and emergency cases.

Methods: The data was extracted retrospectively from the anesthetists' daily activity book during a period of 32 months. The reasons for cancellation were then sorted into one of 5 groups

Results: There were 226 causes of case cancellation. The commonest reasons for cancellation were unavailability of the surgeons (35.8%).

Conclusion: Preventable causes of case cancellation were the most prominent.

Keywords: case cancellation, reasons operation room.

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Introduction

Correspondence:
Dr V. O. Ajuzieogu
Department of Anesthesia
College of Medicine, University of Nigeria Enugu
obinna.ajuzieogu@unn.edu.ng

Case cancellation of surgical cases have been likened to an adverse event that requires routine monitoring because of its effects on utilization of health system resources.[1,2] Furthermore, it is inconvenient, and stressful on patients causing loss of working days and disruption of daily life.[3,4] Every institution strives to be recognized for efficiency, but a high cancellation rate for elective surgical procedures would make this difficult to accomplish.[5]

In other to improve efficiency and reduce the magnitude of this problem, the immediate and remote causes of cancellation of cases scheduled on the day of surgery were analyzed. This will assist in suggesting initiatives that would help to reduce the avoidable cancellations.

Methods

In our hospital, the surgeons have a fixed operating day and theater for elective procedures. There are also theaters reserved for emergencies. They prepare their operation lists for elective procedures and send them to the theater by the preceding afternoon; while emergency lists are sent over as soon as they come. All the patients thus listed are evaluated in the ward by the anesthesia residents and potentially difficult cases are shown to the concerned consultant anesthetists on duty In the event of case cancellation on the intended day of surgery, the cause of such cancellations documented by the anesthetists on duty in a book.

This book was studied retrospectively to discover the documented causes of on surgical day case cancellation from September 2007 to May 2010. There were 226 causes of case cancellations. These were divided into patient-related reasons, 'medical causes', 'administrative/logistic causes' and 'physician-related causes' and others

Results

In the study, there were 226 reasons for cancellation of cases. Of these, patient related causes accounted for 25.3% (57) of causes of case cancellation, physician related causes amounted to 41% (93), administrative/logistics 17.5% (39), medical illness, 10.2% (23) while other causes were 6% (14).

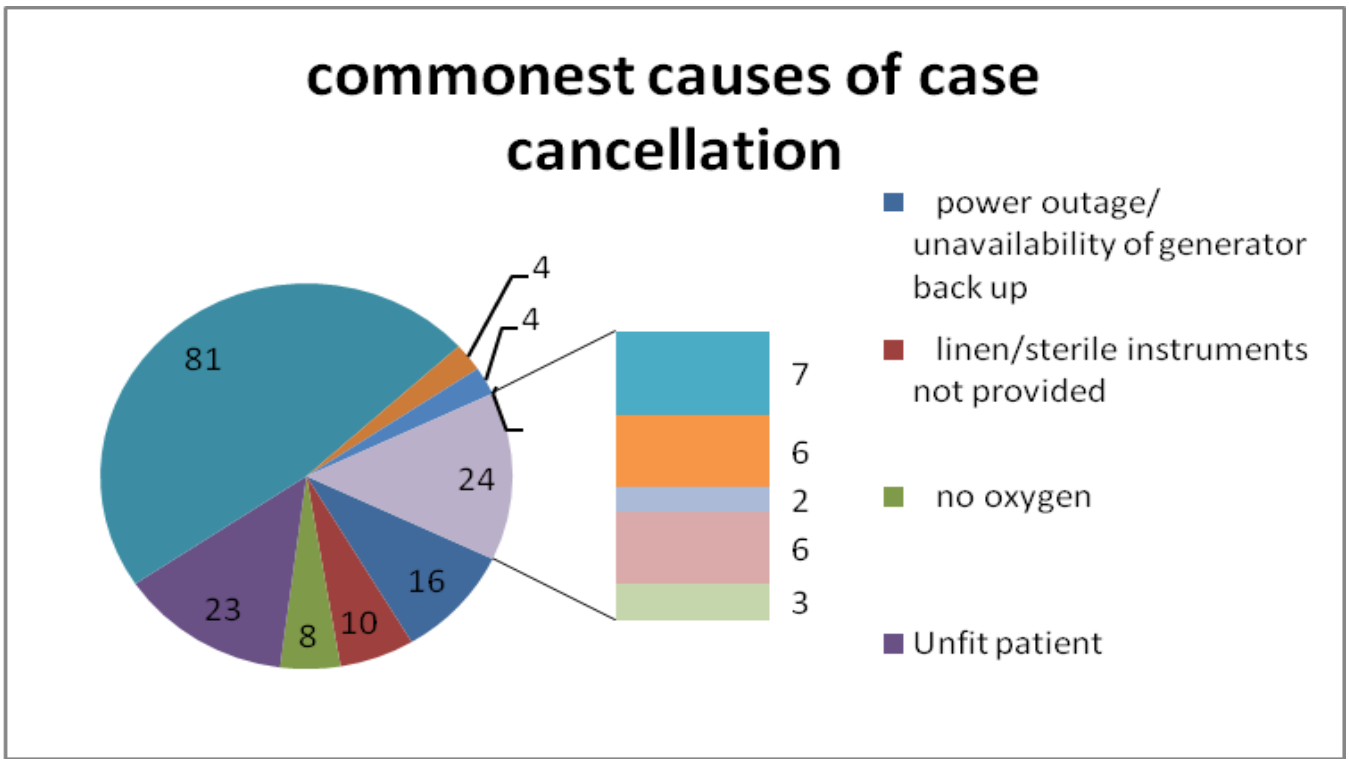
Administrative / logistic causes were as follows: Power outage/no generator, 7.1%, no linen/sterile instruments, 4.4%, no oxygen 3.5%, faulty equipment 0.4%, pharmacist unavailable to dispense drugs, 0.4%, wrong blood delivered to the theater, 0.4%, hospital workers strike, 0.4% and no water 0.4%.

Medical causes were due to unfit patients (10.5%), from poorly controlled hypertension, diabetes mellitus and anemia.

The physician related causes (41%) were: Surgeon unavailable, 26.5% due to administrative and other problems. No reasons were given for surgeons' unavailability. In 9.3% of cases, the surgeons were late, 1.8%, late hour 1.8%, unconfirmed diagnosis 0.4%, anesthetist was ill, surgeon was exhausted and surgeons changed line of management respectively.

Patient related reasons also were detected and included: patient unable to provide material, 8.8%, patient failed to turn up, 6.6%, there was no blood 3.1%,patient refused surgery, 3.1%, patient ate 2.7%, and patient was discharged against medical advice 0.9%.

Other causes that led to case cancellation were emergency cesarean section patients who had spontaneous vaginal delivery, 2.7%, failed intubation, 1.3%, drug failed to work, 0.4%, laryngospasm, 0.4%, another emergency developed just before scheduled surgery, 0.4%, patient could not be cannulated, 0.4% and, anesthetic technician unavailable 0.4%



Discussion

The National Health Service (NHS), UK through its Modernisation Agency Theater Programme has defined case cancellation as those that occur after the patient has been notified of operation date.[6] However, some others define it as those procedures that were cancelled either on the day on which surgery was scheduled, or the previous day, or cases that appeared in the definitive schedule list that ultimately were not performed.[7.8.9].

These reasons can be grouped into broad categories, or just listed.[10] These categories could be anesthetist, surgeon, patient or hospital(administrative/logistics) related; avoidable and unavoidable categories.[6,9] Classification of the reasons benefits the society, as it helps in identifying and dealing with the root causes and flaws in a hospital.

These flaws ought to be addressed because maintaining operating suites and having anesthetist, surgeons and theater staff available on a regular pre-determined schedule is expensive whether in a public or private hospital setting.

Cancellation of scheduled operations would therefore reduce the hospital's income. In addition, it is costly to the patient in terms of working days lost and disruption of daily life.[11] One must also bear in mind that in countries where the extended family still functions, members of the family are indirectly involved and may come from other cities to be with their loved one. This requires that they must take some form of leave from their jobs. With the case cancelled, their travel expenses are wasted and sometimes daily earnings for casual workers.

In a study by Garg *et al.*,2009 [2] it was shown that unavailability of theater time, patient failing to turn up on the day of surgery, medical reasons, change in the surgical plan, unavailability of autoclaved

instruments/linens, unavailability of senior surgeon for the case, inadequate blood products, and refusal of consent by patient resulted in case cancellations on the day of surgery.

Ihezue *et al.*,2007[12] and Bode *et al.*,1996[13] reported that patient related causes was a major reason. Strikes by hospital workers accounted for about half of the hospital related causes.[12] Hospital management and the health ministries were called upon to adopt necessary strategies to stem hospital related wastages.[14]

Jonnalagadda *et al.*, 2005 [15] reported - unavailability of beds in the recovery room, improper preoperative patient preparation, patient not showing up, and unavailability of staff. In the study by Schofield *et al.*,2005 the reasons included no bed available, run out of theatre time, patient non-arrival, patient unfit , and cancelled by patient or relatives.[1] The reasons for case cancellation as reported by Vinukondaiah *et al.*,2000[16] included: lack of operating time, emergency surgery during the elective list, and lack of fitness.

In our institution, cancellation of elective cases due to emergency cases was not a major problem, because of the presence of a dedicated emergency theater. However, the surgeon may sometimes be called to help in an emergency which may delay and even lead to the postponement of an elective case. Inadequate preoperative medical optimization was another important reason for cancellation of cases in our study. The major reasons were poorly controlled hypertension, diabetes mellitus, anemia, malaria and abnormal renal function. Windokun *et al.*, 2002 reported that reasons for cancellation included 'surgeons did not show up', 'surgery postponed by surgeons' and 'patient ill prepared for surgery'.[17] In our study non-availability of theater time was not a reason. We observed that cancellations were mainly due to unavailability of surgeons, unavailability of sterilized instruments, and technical problems with instruments, patients not being able to provide materials needed for the procedures or even failing to turn up.

Late start of the theater due to absence of staff has also been reported to lead to underutilization of theater time leading to cancellation of the cases.[18] In our center, lateness is an issue, but has not been properly documented. Weinbroum *et al.*, 2005[19] reported that 15% of the theater time was wasted due to inappropriately prepared patients, unavailability of surgeons. Hussain,2003[20] however reported that only 8% of all cancellation of cases on the day of surgery was anesthesia related. This is similar to the findings in our study. Last-minute cancellation due to failure of a patient to present is particularly disconcerting. It may be due to the patient's last minute doubts and fears. Paschoal and Gatto 2006[21] reported that 54.3% cases of the total cancelled cases were due to absenteeism of the patient because of unawareness of the date of surgery, clinical problems like respiratory tract infections and social/economical reasons. Hampal and Flood,1991[22] found that 14.6% of operations were cancelled due to non-attendance of the patient, which compares with 12.8% being cancelled by the hospital.

In our study, although failure of the patient to present for surgery occurred, it was not possible to elicit the reasons why it happened. This however should be pursued and patients properly counselled in order that their fears can be overcome and that communication must be maintained with the doctors in the event of unforeseen circumstances Disruptions in the power supply has been men-

tioned as one of the causes of delay in the operation in third world countries.[23] This is in line with our study and necessitates that frequent power failure and lack of surgical/theater materials should be overcome.

There are some limitations with this study. First is that the number of cases cancelled, patient demographics were not documented in all instances so we could not calculate the rate of case cancellation in our hospital. Also some of the cancelled operations had no specific reason recorded in the book. Furthermore, this data was collected not from the patient's folder but from a recording kept by anesthetists which some may consider biased. Notwithstanding, the results illustrate the need for a more concerted effort with regards to the accuracy of note-keeping in both the theater, anesthetist and patients record. This study also highlights the need for better clinical governance and provision of infrastructure.

Poor co-ordination of different departments involved in the running of operating rooms result in surgical case cancellations. Audit should be carried out at regular intervals to evaluate these reasons. A concerted effort should be made to ensure that medical records are kept up to date and that the reason(s) for cancellation of an operation should be stated not only in the patient's notes, but also in the theater register for easy reference. The introduction of preoperative anesthesia clinics should also be considered in our environment.

Any postponement of surgery should be justified. All the requirements necessary for scheduled surgical list should be available as much as possible.

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