

Waiting List of Surgical Operation in Rural Area and Causes of Cancellation

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ABSTRACT

Objective: To find out the number and type of surgical cases on waiting list and pinpoint the percentage and causes of noncompliance in a rural hospital of Pakistan. It is to find out how we can decrease this cancellation. **Study Design:** Retrospective study. **Settings:** Foundation Hospital Rajana, District Toba Tek Singh Pakistan. **Duration:** From 07.06.2014 to 29.05.2016. **Methodology:** The percentage of cases that presented in the ward at schedule date are noted and tried to find out the causes of noncompliance. **Results:** 972 cases of surgery were booked for operations in 189 outdoor days out of which 23% were cancelled. Majority of the cases were Hernias followed by G.B diseases. 70.64% of the cancellation was patient’s personal reason and 18.81% of them were due to other reason that can be minimised. **Conclusion:** Out of 972 cases for operation registered for waiting list 77% complied and 23% were cancelled. The cases cancelled for other medical reasons were 42 out of 223 which could be minimised by proper planning.

Keywords: Surgical operations waiting list, Non-compliance, How to minimise it.

INTRODUCTION

The whole study is conducted in Foundation Hospital Rajana which is a welfare healthcare centre situated in a typical rural area of Pakistan in Toba Tek Singh District. It was built and is managed by British based Pakistani emigrants NGO, U-care Foundation and Pakistan International Foundation, Glasgow. Basically, it was meant for Obstetrics and Gynaecology and its supporting services like Paediatrics, Neonatology, Medicine, Anaesthesia, Radiology and Pathological Laboratory. Surgical department was added on the great demand of the local population. When I say surgical department, there is no surgical department in real sense except a single fully trained and qualified general surgeon who caters for cold cases of surgery which includes Urology, Orthopaedic, Head and Neck cases. We conduct four surgical outdoor sessions and operate on two days in a week. We have a fully equipped twin operation theatre, which is shared by Gynae and Obs Department. We have a well-equipped Clinical Laboratory, Ultrasound, X-ray department with latest machines for almost all test managed by highly qualified consultants and technicians. The purpose of this study is to find out the type of surgery we receive in the rural private welfare healthcare setup and number and causes of their cancellation.

METHODOLOGY

Study Design: Retrospective study.

Settings: Foundation Hospital Rajana, District Toba Tek Singh Pakistan.

Duration: This study extends for two years from 7th June 2014 to 29th May 2016.

Sample Technique: Randomized sampling.

Sample Size: 972 cases of surgery.

Data Collection Procedure: We take patients for operation who fall into ASA Class I or II (Table 1) as far as medically fitness is concerned; we also take some of the Class III as well, provided disease is well controlled clinically.

ASA physical status classification system for assessing fitness for surgery. Table 1

Table 1: ASA (American Society of Anesthesiologist)¹

Class	Definition
1	Normal healthy patient
2	Patient with mild systemic disease (no functional limitations)
3	Patient with Severe Systemic disease imposing functional limitation on patient
4	Severe Systemic disease which is constant threat to life (functional incapacitated)
5	Moribund patient who is not expected to survive without operation
6	Brain-dead patient whose organs are being removed for donor purpose
E	If the procedure is an emergency, the physical status is followed by “E” (for example, “2E”)

All the cold cases that report in surgical OPD are examined by me to assess the general health besides his actual surgical disease as advised by Van Kiel² as we do not have preoperative clinic which is ideal³. A short but detailed history and examination is done, Blood pressure is taken, HB, Grouping, blood sugar, Hepatitis B and C, X-ray chest and ECG is done in each patient as a routine. If they are fit then they are put in waiting list which may be one to three weeks depending on work load. Patients are admitted in the ward one day before the operation where the anaesthetist examines the patients and formulates the anaesthesia plan. If he wants, he orders for other special investigations. Other associated medical illness like hypertension, D.M, liver, kidney, Heart, thyroid disease, the drugs which patient is already taking and allergies are noted and treated. In cases that do not report or postponed, we try to find out the causes of non-compliance.

Inclusion Criteria: A total of 972 cold cases admitted in two year are included in this study.

Exclusion Criteria: We have excluded the emergency operations and day cases from this study. We do not take the following cases and refer them to the respective specialists or highly specialized tertiary care units.

1. Heart disease^{1,4}

A) Asymptomatic murmur that have poor exercise tolerance, have history of angina, sycope and breathlessness, abnormal impulse and LHV/LV strain on echo.

B) Myocardial infarction within 8 weeks.

C) Unstable coronary syndrome.

D) Decompensated heart failure

E) Significant Arrhythmia

F) Severe valvular disease

2. Hypertension⁵ uncontrolled end stage 3 hypertension (when systolic is above 180 and diastolic above 110mm mercury)

3. Diabetes Mellitus⁶ (DM) Uncontrolled DM when blood sugar is above 250mg and patient has ketosis specially when associated with cardiac, renal diseases and hypertension.

4. Liver Diseases⁷ Advance liver disease specially when platelet level are below 50×10^9 pradelow and bleeding varices controlled with or without treatment within 6 week while lead R.M.

5. Kidney disease⁸ High creatinin value, high potassium >5.5 and low sodium <120 .

6. Cardiovascular accident⁹ Any attack within 3-6 month

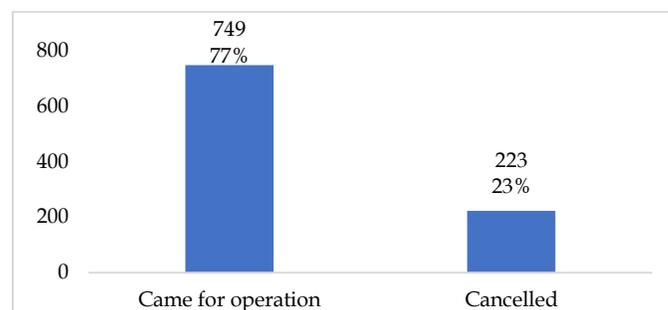
7. Respiratory Disease¹⁰ Uncontrolled asthma and C.O.P.D in patients above 50 years age.

8. Thyroid function¹¹ Uncontrolled thyrotoxicosis and high T3 T4 and low TSH.

RESULTS

Out of total 972 cases 223 (23%) were cancelled. Table 2

Figure 1: Waiting list of registered patients (n = 972)



The most common operations admitted are for Hernias followed by Cholelithiasis. Table 2

Table 2: Type of operation

Cases	Number (Percentage %)
Hernia	200 (20.57%)
Gallbladder	193 (19.85%)
Appendicitis	47 (4.85%)
Laparotomy	22 (2.26%)
Pile	23 (2.40%)
Fistula in ano	52 (5.35%)
Fissure in ano	7 (0.72%)
Stone Kidney	48 (4.94%)
Stone Ureter	3 (0.31%)
Stone Bladder	12 (1.23%)
Prostate	69 (7.10%)
Testicular & scrotal diseases	43 (4.42%)
Breast Diseases	41 (4.22%)
Thyroid Disease	22 (2.26%)
Bone and joint Operation	33 (3.40%)
Amputation	14 (1.50%)
Other	141 (14.50%)
Total	972 (100%)

154 cancellation are due to patients personal problems and non-affordability was on the top 58 cases and medical reasons was only in 42 patients. Table 3

Table 3: Reason for postponement (n=972)

Reason	Number (Percentage %)
Personal: Couldn't not afford	58 (5.98%)
Family Problem	48 (4.95%)
Weather	48 (4.95%)
Non availability: Surgeon	5 (0.52%)
Anaesthetist	6 (0.62%)
Blood	6 (0.62%)
Unscheduled Holidays	10 (1.03%)
Medical Problems	42 (4.33%)
Total	223 (23%)

Commonest causes were uncontrolled hypertension, respiratory disease and D.M. but this cause is only in 42 out of 972 cases on waiting list (4.33%). Table 4

Table 4: Medical Reason for cancellation

Disease	Number (Percentage %)
Lungs and Respiratory	9 (21.45%)
Uncontrolled Hypertension	12 (28.51%)
Liver Cirrhosis	6 (14.28%)
Uncontrolled D.M	8 (19.04%)
High Blood Urea	3 (7.14%)
Uncontrolled Thyrotoxicosis	2 (4.76%)
Myocardial Infarction	2 (4.76%)
Total	34 (100%)

Table 5: Cancellation rate of surgical operation in different countries

Country	Percentage Cancellation
Finland ¹⁷	4.5%
Hong Kong ¹⁸	7.6%
India ¹⁹	17.6%
K.S.A ²⁰	7.6%
Pakistan Urban ²¹	21.0%
South Africa ²²	5.6%
Spain ²³	6.5%
USA ²⁴	16.5%
UK ²⁵	4%
Present study-Pakistan Rural	23%
Internationally Accepted ²⁶	<5%

DISCUSSION

234 million of non-cardiac operations are performed every year throughout the world out of which one million die ¹² and 3-17 percent get some sort of complications. ¹³ to reduce the mortality and morbidity A.S.A ¹ has given a guide line regarding the fitness of the operation (Tab-VI). We perform only operation on class I, II and some of the class III patients. For ASA grade III patients if they have a history of heart disease or D.M hypertension, respiratory disease, kidney and liver disease, thyrotoxicosis, neurological disease or history of uptake of any drug we try to manage it accordingly with the help of medical specialist.

1. Heart Disease ⁽⁴⁾⁽¹⁴⁾ Asymptomatic murmur without any other sign or symptoms. Do not need any treatment if patient had M.I or Angina for more than 8 weeks, no heart failure or arrhythmia or severe valvular disease with normal ECG or Echo. They continue the following drugs if already taking

a. Beta-blocker, no fresh beta-blocker are started; ALPH2 agoit is a better option.

b. Nitrates are continued

c. Calcium- channel blockers are continued

d. Anti platelet drugs are discontinued except aspirin.

e. Warfarin to be stopped for 5 days till INR is below 1.5 and can be started again 12-24 hours after the operation

f. Un fractionated heparin should be stopped 4-6 hours before and started 12 hours after

g. The HB must be above 9G. Avoid tachycardia or hypotension or hypertension and give them good analgesia.

h, Diuretics-continue it if patient is taking for old heart or kidney failure.

2. (Diabetes Mellitus) D.M ⁶ Blood sugar up to 150-180mg/dl can be operated. Long-acting oral hypoglycaemic drugs should be stopped 24 hours before surgery and better put the patient on insulin especially for type I and keep the blood sugar between 4-10 mol.

3. Hypertension.⁵ Ideal blood pressure should not be more than 140/90 mm mercury. Some patients get raised blood pressure due to tension. Such patients are given sedatives like IV. Midazolam 2-3 mg pr diazepam 10mg or Diuretics or injection hydralzin (alternately sub lingual captopril 25mg or Adalat after) or give them all one after other.

4. Respiratory Disease.^{10,15,16} For mild coryza nothing is done. Smoking is stopped 8 weeks or at least 12 hours before surgery. For controlled asthma, continue aminophylline, mast cells stabilizer and steroid. Give him additional 250mg of hydrocortisone before induction of anaesthesia. For mild C.O.P.D patients should be nebulised with bronchodilator or steroid or salbutamide before and after surgery.

5. Liver Disease ⁷. Liver functions should not be grossly disturbed, LFT, PT, APT and Platelet count should be within normal range. If INR is more than 1.5, Vitamin K can be given. Variceal bleeding should be controlled first.

6. Kidney Disease.⁸ Blood urea, creatinine, sodium and potassium should be within normal range. Mild depressed function can be corrected by dialysis 4-6 hours before operation. HB level up to 9 g/dl is accepted. Do not give too much blood quickly which may raise the blood pressure or cause hyperkalaemia or C.C.F.

7. Thyroid Disease.¹¹ Hyperthyroidism or hypothyroidism should be controlled and T3 T4 TSH and calcium should be normal, continue beta-blocker.

8. Central nervous system disease.⁹ For epileptic patients continue antiepileptic drugs. Avoid prolonged fasting. Diazepam and Lorazepam are more useful drugs for sedation.

Despite our strict criteria for selection of our cases for operation and preoperative care cancellation rate is 23%, which seems to be higher even than Pakistani Urban area (Tab VI). As mentioned earlier that this study is conducted in a rural area and out of 223 cancellation

70.64% are due to patient's personal and non-medical reason. First and foremost is non affordability which we cannot help. In a typical rural society of this area of Pakistan, the people are very closely interknitted with each other and share the occasion of sadness and happiness with each other's. They postpone the non-emergent events like cold operation, which is the second major cause of cancellation; Third major cause of cancellation is sudden change in local weather especially extremely cold days and heavy rain when people don't like to come out of their houses unless they have some acute emergency

The medical reason of cancellation being 4.33%, which is lower even than internationally accepted rate i.e., 5%²⁶ In Pakistan 58% of the population is ignorant of their hypertension and 10% of their DM²⁹. This could be one of the causes of cancellation. The cause of this low incidence due to medical disease is not only due to strict criteria for selection of the cases for operation but also preoperative treatment while admitted in the ward one day before the operation. This can be reduced further if we have preoperative clinic².

CONCLUSION

A study to find out the cancellation rate of surgical operation in a rural hospital of Pakistan is conducted. The criteria of selection health wise are discussed. Our cancellation rate is 23% out of which 4.37% are due to medical fitness problem, which could be further, minimised by having preoperative clinic.

CONFLICT OF INTEREST / DISCLOSURE

None.

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