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CANCELED SCHEDULED ELECTIVE SURGERY IN OUR PUBLIC HOSPITALS, WHY?

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Cancellation of operations increases theatre costs and decreases efficiency as well as causing emotional trauma to the patients and there families. Elective surgery cancellation is a significant multifactor problem with far-reaching consequences[1]. Obviously, all cancellations can not be avoided. Patients may have a change in their medical condition on the day of surgery which can not be expected or there is unpredictable condition in the hospital. Most problems, however, can be prevented with a little initiative as we noticed that in private hospitals all these reasons may be of negligible significance.

Postponing patients on operation lists occupy a significant population up to 25% of cases per year in some centers. Majority of cancellation were due to reasons other than patient's medical conditions. Better management could have avoided most of these cancellations[2].

Non-patient causes

Sometimes hospitals need to postpone elective surgery. This is because demand for emergency services is unpredictable and patients who attend hospitals with life threatening illnesses take priority over patients needing elective surgery[3] as in sudden war or environmental catastrophes.

Electricity failure and unprepared generator power are common causes to postpone surgery, also failure of water supply to the theatre and failure of sterilization of instrument and operative towels & gowns.

Some times we came to theatre and there is unplanned strike of the staff or doctors.

Commonly we face delay in operative time so the last cases in the list will be off, also anesthesiologists and assistants may get stressed due to overwork and shortage in staff. Often the residents did not bring the list for signature in the day before and this lead to off the list or some times there is an error of the names in the list.

Equipment failure is some times noticed when the surgeon face in the day of operation that his special equipment or microscope does not work.

Patient may have incomplete or missing preoperative investigations as here we don't pay preoperative visit to the patient in the ward the day before so the patient will be postponed until there is complete investigations.

Unannounced holidays are frequently seen especially in the last years so all the lists will be off.

Many lists were postponed because of the lack of full oxygen cylinders, I.V. fluid or anesthetic drugs such as muscle relaxants or antidote. Blood is some times not prepared for major surgery or it was prepared but they use it for emergency situation

Surgeons may came in the morning of operative day and they face the lack of the material they want to do surgery with such as threads, mesh, screws, plates, sterilized packs and so on.

Table I: Non-patient causes

The demand of the theatre for emergency services
Electricity failure
Failure of sterilization of surgical instruments and clothing
No water supply
Strikes of the doctors or the staff
No theatre time (delay in the list)
Operative list error
Equipment failure
Missing or incomplete preoperative investigations
Unannounced holiday
Shortage of oxygen supply, blood or anesthetic agents
Operative material lack

Non-medical patient causes

People can be cancelled from lists for a number of reasons: they have paid to have their operation in a private hospital; they have been on multiple waiting lists and have had their surgery elsewhere; they no longer want surgery; or they have died.

Some times the patient condition resolve suddenly such as having a ureteric stone and it passes down in the morning of the operation.

Patient some time does not apply the recommendations that he should stop smoking or he should be deprived from food and fluid for at least 4-6 hours prior to surgery. In spite of these regulations but patients and their families think that it is better to take a heavy meal prior to surgery so they can stand anesthesia.

Some times we face a problem that patient came alone to the hospital at the day of surgery without relative or companion so in some major surgeries this patient will be postponed until he bring a companion.

Also the cultural believes play a major role, the patient may not attend to hospital as he change his mind and refuses surgery due to superstitious things. Many patients wait for a favorable sign from God or environment so they shall do surgery.

Informed consent is a very important medico-legal aspect and it takes priority in proceeding to any intervention, so failure to obtain it, surgical intervention most likely postponed until the patient signs the written consent.

Patients or their relatives are some times trouble makers and they want a guarantee for the success of the operation and this may irritate the surgeon and cancel the operation.

Table II: Non-medical patient Causes

Operation canceled by the patient or the patient is dead
Patient change to a private hospital
Patient condition resolved
Recent intake of food and fluid
Smoking
Difficulty in obtaining informed consent
Superstitious
No relative with the patient
Bad patient-surgeon relationship (patient is trouble maker)

Main medical causes

Hypertension: Preoperative hypertension, when well treated and controlled, does not appear to be an important risk factor for perioperative myocardial infarction. Controversy exists, however, on the safety of proceeding with surgery when patients have poorly controlled arterial hypertension. Patients with previously diagnosed and treated hypertension, who have no end-organ disease, may be safely anesthetized after rapid preoperative control of their blood pressure. However, if there is any evidence of end-organ disease, or if the hypertension is not currently being treated, the more prudent course would be to postpone elective surgery until blood pressure can be controlled on an outpatient basis. Of course, if the blood pressure is severely elevated or the patient is symptomatic, emergency treatment and hospital admission are in order[4].

Pulmonary: There are certain pulmonary conditions that needs to be questioned; Is the patient at risk for weaning difficulties? Is there any risk of post-operative pneumonia? Does he have COPD that would be improved with a course of round the clock inhalers preoperatively[5,6]? Chronic pulmonary diseases are getting more important in daily anaesthetic practice, because prevalence is increasing and improved anaesthetic techniques have led to the abandonment of previous contraindications to anaesthesia. It is therefore essential for the anaesthetist to be up to date with current clinical concepts and their impact on the conduction of anaesthesia as well as new insights into how to anaesthetize these patients safely. If patients are treated adequately, open and minimally invasive operations can be safely performed under regional and general anaesthesia. The management of acute exacerbations remains challenging, and first-line medical treatment should be supported by non-invasive ventilation. In controlled mechanical ventilation, parameters should be set to avoid dynamic hyperinflation[7]. Smoking is another risk factor which let us think about postponing surgery as smoking changes numerous alveolar macrophage functions and lead to postoperative pulmonary complications, it also impairs antimicrobial and proinflammatory responses in alveolar macrophages during anesthesia and surgery.

Cardiac: Does the patient have an increased risk of perioperative myocardial infarction, heart failure or arrhythmias? All these conditions should be kept in mind in dealing with cardiac illness, that's why thorough and careful investigations should be done prior to surgery, if not, we shall postpone the surgery. The cardiovascular effects of general anesthesia include changes in the arterial and central venous pressures, cardiac output, and varying heart rhythms, which occur by the following mechanisms: decreased systemic vascular resistance, decreased myocardial contractility, decreased stroke volume, and increased myocardial irritability. Induction of general anesthesia lowers systemic arterial pressures by 20-30%, tracheal intubation increases the blood pressure by 20-30 mm Hg, and agents such as nitric oxide lower cardiac output by 15%. The use of fentanyl, sufentanil, or alfentanil results in less myocardial depression compared to inhaled anesthetics. Yet, these intravenous agents still cause venodilation, thus reducing preload and, hence, depressing cardiac output. Patients with congestive heart failure (CHF) are particularly sensitive to these hemodynamic changes. By increasing the preoperative volume status and applying the Frank-Starling principle, this decrease in cardiac output can be offset. Additionally, inhalational and intravenous anesthetics along with muscle relaxants can be detrimental by

sensitizing the myocardium to circulating catecholamines. As a result of the stress of the surgical procedure, circulating catecholamine levels are elevated, thereby increasing the risk of ventricular ectopy[9].

Endocrine: Does the patient need modification of anti-diabetic medication? Does the patient need stress-dose steroids? Serious side effects of anesthesia are uncommon, especially in people who are otherwise generally healthy. Anyone who has medical problems, such as heart, lung, kidney, or endocrine conditions, including diabetes, should tell the person who will be giving the anesthesia. Also, a person should report any medications he or she is taking. Many times a patient came to theatre with high fasting blood sugar although he was normal in the night before, this is a challenge to the anesthesiologist, should he fix the problem and continue? Or should he postpone?

Hematologic: Is there a severe anemia that mandates preoperative transfusion? Is there a risk of bleeding? Does anticoagulation need to be modified? Does the patient need antithrombotic therapy after surgery? Any abnormal blood tests which affect anesthetic outcome?

Abnormal liver function and/or renal function could affect the pharmaco-kinetics as well as pharmacodynamics of anesthetic drugs.

Table III: Main medical patient causes

Hypertension
Pulmonary disease & smoking effects
Cardiac: MI, HF, Arrhythmias
Endocrine: Diabetes
Hematologic: Anemia, Bleeding tendency, Abnormal blood tests which affect anesthetic outcome & overlooked in preoperative visit
Abnormal liver or renal fuction

In summary, major hospitals invest considerable resources in maintaining operating suites and having surgeons and theatre staff available on an agreed schedule. However, a problem in most hospitals is cancellation of scheduled operations at the last minute, even on the day of surgery. In some cases, patients have been prepared for theatre, and staff are assembled and expecting to operate. In others, patients and staff may not be directly affected (eg, when a surgeon has cancelled an operation, the patient has been informed, but the theatre booking has been retained).

Late cancellation of scheduled operations is a major cause of inefficient use of operating-room time and a waste of resources. It is also potentially stressful and costly to patients in terms of working days lost and disruption to daily life. There have been reports about the depressing effect of cancellation on patients and on the high level of emotional involvement before surgery[10].

In most cancellations the anesthesiologist is blamed, thus the reason for cancellation should be reviewed and discussed on scientific bases; moreover a team discussion makes cancellation more convenient and reduces dissatisfaction.

Studying surgical cancellation in each hospital can help in decreasing and preventing sudden cancellation and improving the outcome by regular preoperative checking and better patient–doctor as well as surgeon–anesthesiologist relationship. Furthermore regular equipment and medical supplies checking help in reducing this awful condition.

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