Surgical Safety Checklist to reduce Morbidity and Mortality

An eye opening paper on surgical safety checklist was presented in Surgicon 2010 held in January 2010.[1] In this paper tertiary care hospitals of Karachi were selected to assess the standard of care according to WHO surgical safety checklist.

The highlights of the study were:

1. Surgical site was marked in 9.7% cases only.
2. Instrument, needle and sponge were not counted in 20.4% of cases.
3. Formal team introduction by name and role was not done in 88.3% of cases.
4. Prophylactic antibiotic was not administered in 36.9% of cases.
5. Sterility was not maintained in 21.9% of cases.

The overall results of this study show an urgent need to implement surgical saftey checklist in our hospitals. The observations of surgical safety checklist will prevent operation on the wrong site, wrong patient and wrong surgical procedure. These adverse events can be and must be prevented. Patients safety during surgical procedures is the responsibility of our profession. We should not let media exploit our profession because we have not observed the standard care and surgical checklist.

In 2004 it was estimated that 234 millions surgical procedures were performed yearly, worldwide, but the number is exceeded since. In 2006 it exceeded double the volume of childbirth which was 136 milions births.[2] It is about one operation for every 25 human beings alive.[3] In 2008 World Alliance for patient safety published a report estimated to affect 3-16% of all hospitalized patients and more than half of these are known to be preventable. Atleast half of the events occur during surgical care and surgical adverse events probably represent a major source of morbidity and mortality in the world. Assuming 3% perioperative adverse events rate and 0.5%, mortality rate globally, almost 7 millions surgical patient would suffer significant complications each year, 1 million of whom would die during or immediately after surgery.[4] A global research was conducted in 2007-2008 to reduce morbidity and mortality in surgical patients by introduction of surgical safety checklist.[5] The results were outstanding. The mortality rate fell from 1.5% to 0.8% i.e. out of every 400 surgical patients 6 patients were dying which were reduce to 3 people. In patients complication occured in 11% of patients at baseline and in 7% after introduction of checklist.[5]

We as responsible surgeons should do our own audit on regular basis. This is a part of good governance and good clinical practice. The audit include three attribute reconizing high standard of care, accountability of those standard and constant dynamic improvement. Self accountability will prevent unnecessary media campaign against the health care provider.

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SURGICAL SAFETY CHECKLIST

(FIRST EDITION)

Before induction of anaesthesia ---------- Before skin incision ---------- Before patient leaves operating room

SIGN IN

- ☐ PATIENTS HAS CONFIRMED
  - IDENTITY
  - SITE
  - PROCEDURE
  - CONSENT

- ☐ SITE MARKED/NOT APPLICABLE

- ☐ ANAESTHESIA SAFETY CHECK COMPLETED

- ☐ PULSE OXIMETER ON PATIENT AND FUNCTIONING

DOES PATIENT HAVE A:

KNOWN ALLERGY?

- ☐ NO
- ☐ YES

DIFFICULT AIRWAY/ ASPIRATION RISK?

- ☐ NO
- ☐ YES, AND EQUIPMENT/ ASSISTANCE AVAILABLE

RISK OF > 500ML BLOOD LOSS (7ML/KG IN CHILDREN)?

- ☐ NO
- ☐ YES, AND ADEQUATE INTRAVENOUS ACCESS AND FLUIDS PLANNED

TIME OUT

- ☐ CONFIRM ALL TEAM MEMBERS HAVE INTRODUCED THEMSELVES NAME AND ROLE

- ☐ SURGEONS, ANAESTHESIA PROFESSIONAL AND NURSE VERBALLY CONFIRM
  - PATIENT
  - SITE
  - PROCEDURE

ANTICIPATED CRITICAL EVENTS

- ☐ SURGEONS REVIEWS: WHAT ARE THE CRITICAL OR UNEXPECTED STEPS, OPERATIVE DURATION, ANTICIPATED BLOOD LOSS?

- ☐ ANAESTHESIA TEAM REVIEWS: ARE THERE ANY PATIENT-SPECIFIC CONCERNS?

- ☐ NURSING TEAM REVIEWS: HAS STERILITY (INCLUDING INDICATOR) BEEN CONFIRMED? ARE THERE EQUIPMENT ISSUES OR ANY CONCERNS?

HAS ANTIBIOTIC PROPHYLAXIS BEEN GIVEN WITHIN THE LAST 60 MINUTES?

- ☐ YES
- ☐ NOT APPLICABLE

IS ESSENTIAL IMAGING DISPLAYED?

- ☐ YES
- ☐ NOT APPLICABLE

SIGN OUT

NURSE VERBALLY CONFIRMS WITH THE TEAM:

- ☐ THE NAME OF THE PROCEDURE RECORDED

- ☐ THAT INSTRUMENT, SPONGE AND NEEDLE COUNTS ARE CORRECT (OR NOT APPLICABLE)

- ☐ HOW THE SPECIMEN IS LABELLED (INCLUDING PATIENT NAME)

- ☐ WHETHER THERE ARE ANY EQUIPMENT PROBLEMS TO BE ADDRESSED

- ☐ SURGEON, ANAESTHESIA PROFESSIONAL AND NURSE REVIEW THE KEY CONCERNS FOR RECOVERY AND MANAGMENT OF THIS PATIENT

THIS CHECKLIST IS NOT INTENDED TO BE COMPREHENSIVE ADDITIONS AND MODIFICATIONS TO FIT LOCAL PRACTICE ARE ENCOURAGED