

# Type of Surgeries and Modalities for Post Operative Pain Management in a Secondary Healthcare Institute

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**Abstract:** Various type of surgeries are carried out in institutes of higher learning everyday. They can range from highly complex tumor removal extensive surgeries to small surgeries like appendectomy and incision and drainage. Secondary care institutes which cater to the majority of the population carry out surgeries in various disciplines like Gynaecology, obstetrics, ophthalmology, otorhinolaryngology, general surgery and orthopedics. The following observational study is carried out in a sub divisional secondary hospital to determine various type of surgeries performed and analgesic modalities used by surgeons for post operative pain management. In western countries pain management and analgesia is domain of anesthesia but in our country it is one of the neglected aspect of post operative management with surgeons prescribing the pain medications.

**Keywords:** Anesthesia, types of surgery, analgesia, post operative complications

## 1. Introduction

In developing countries healthcare system is divided into primary, secondary and tertiary healthcare institutes.

**Primary Healthcare:** These are usually small health centers manned by single medical officer and support staff to cater to day to day ailments of community. They are the first touch points for many patients and can act as screening centers for various communicable and non communicable disorders. They also act as referral centers for sick and trauma patients.

**Secondary Healthcare:** These are the hospitals that are generally situated in a center place, sub division, tier two cities. They cater to all the referrals from the nearby PHCs and also carry out certain specialized services depending upon the availability of specialist doctors in various modalities. The services range from running OPDs in various different specialities, lab, radiology and diagnostic services and in some cases fully equipped operation theatre.

**Tertiary Healthcare:** These are hospitals which cater to one or more districts. Along with all the services provided by secondary health institute, they also provide specialized diagnostic and curative services and teaching facilities to medical and nursing students.

### Surgeries in various departments of our institute

Ours is a secondary healthcare institute with a fully equipped and modern operation theatre. We cater to all the departments according to the days allotment system. Though we don't have a separate OT for emergencies but we cater to emergency as and when they arrive. In the last one year 676 major surgeries and 156 minor surgeries were carried out in our hospital.

### Gynaecology and Obstetrics

This is the department which handles the maximum number of referrals from various other nearby institutes. Among them maximum are expectant mothers which are referred to our institute for emergency cesarean section. Every month around 30 to 40 LSCS including both emergency and elective LSCS are carried out in this hospital. This department also carries out other major surgeries like total abdominal hysterectomies, vaginal hysterectomies, exploratory laprotomy and proceed. These major surgeries can range from 10 to 15 in a month. The mode of anesthesia in these surgeries is either SAB or Combined Spinal epidural (CSE) and rarely General anesthesia. Minor surgeries like tubal ligation and tubal re canalization are also performed mainly under sedation and monitored anesthesia care. The patient age group ranges from 18-60 yrs depending upon the type of surgeries.

### General Surgery

Another very important department which is a backbone of our hospital is general surgery. Manned by 3 surgeons our facility is performing 12-16 cholecystectomies monthly both open and Laproscopic. Orchidopexy and orchidectomy i.e. fixation/ removal of non functional testis and Hernia repair whether epigastric, umbilical and inguinal are also done here. Our institute usually perform 10 to 12 such surgeries/month. In emergency 3 to 5 appendectomy and torsion testis are done every month. All these surgeries are mainly done under SAB or CSE. Laproscopic cholecystectomies are performed under general anesthesia using CETTs or LMAs. The patient age group is between 8 to 65 yrs.

### Orthopedics

This is another department available in our hospital but due to non availability of C-arm they are not able to perform surgeries. Occasionally they do one or two implant removals and closed reduction. These are performed SAB and GA. The patient age ranges between 15 to 60 yrs.

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### Other Departments

**ENT:** This department usually carries out surgeries under monitored anesthesia care or sedation. They carry out surgeries like biopsies, foreign body removal, deviated nasal septum corrections and minor tissue repairs. The patient range from toddlers with foreign body on nose or ear to elderly with smoking history for biopsy. DNS is usually done for young patients aspiring to join the armed forces. Around 12-15 such surgeries are carried out every month.

**Ophthalmology:** This department usually performs cataract surgeries in elderly and foreign body removal in young patients. These surgeries are usually performed under local anesthesia with occasional demand for sedation or MAC. Around 5-10 surgeries are carried every month.

### Analgesic Modalities of various departments

The mainstay of post operative analgesia in almost all departments is the same barring some patients which need occasional analgesia supplementation for severe or local pain. Pain management in the postoperative setting presents a challenge as the development and severity of pain after surgery is dependent on various patient and procedural factors.[1-3]As strategies for postoperative pain treatment continue to evolve rapidly in the context of an increasing focus on enhanced postoperative recovery.[4]

But in developing countries like ours we have limited options due economical constraints.

### Intravenous agents

Paracetamol 1gm given twice to thrice daily along with Diclofenac 75 mg form the main analgesic in post op wards. Drotavarine 20 -40mg or tramadol 50mg is given in breakthrough pain.

### Oral agents

After a day or two the patients are shifted to oral drugs which may be a combination of one or two drugs from the following list

1. Paracetamol 650 mg
2. Acelofenac 100mg
3. Ibuprofen 400mg
4. Diclofenac 50mg

Surgeries performed under local or Mac are given a combination of oral analgesics.

## 2. Conclusion

As we can see that there are various type of surgeries conducted in secondary level institutes ranging from minor to major surgeries. Secondary institutes not only reduce the burden of tertiary institutes but also filter down cases which can be dealt at the periphery thus reducing the unnecessary referral. It is also economical for the patients and the system.

In contrast with the western countries where analgesia prescription is the domain of anesthetist, in country like ours it is the operating surgeon who has upper hand in prescription of pain medicines. The reason for this may be over burdening of anesthesia care provider, lack of trained anesthesia care givers and support staff. Also as the surgeon

is the primary contact with the patient he acts as the first line and last line of contact with anesthetist acting as an intermediate care provider which has a less role in decision making about analgesia.

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### Conflict of interest

There are no conflicts of interest.

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