

Day Case Laparoscopic Cholecystectomy (DCLC) in a Developing Country

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Introduction

Laparoscopic Cholecystectomy started in 1990 in India, but, Day Case Laparoscopic Cholecystectomy (DCLC) is not an established norm. The review of literature from India, throws up just a handful of studies, usually as retrospective analyses of single individual centres. The attitude of healthcare providers and the patients usually is 'What difference does it make?' which defeats the purpose of Day Surgery all together.

One of the oldest published data from India, had found 313 cases fit for DCLC, and concluded that it is a safe and feasible procedure for a developing country, provided they develop their own guidelines based on local patient demography [1].

Surgeons' point of view

Usually, most are single surgeon teams, working in small set-ups across the country. There are very little data on DCLC from India, mostly based on individual experience from private sources and are dependent on western data. Therefore, it is an extra effort on the part of the surgeon to create a team, which will work in unison and follow the set pattern.

Safe guidelines will need to be set in place as they are non-existent as of now. Also, the training provided for Lap surgeries are available only in larger towns and Metro cities, so, opportunities for training for DCLC does not exist. Objections have been raised about several aspects of training where day care surgery has been used [2,3].

Patients' point of view

The process of consultation, investigations, review, medical/ anaesthesia fitness, surgery and follow-up, entails several visits to the hospital. Cost and inconvenience are compounded for all concerned. Therefore, considering these facts, there is not much difference in the cost of a hospitalised patient, versus Day Surgery patient. In fact, it is less inconvenient for a patient who is hospitalised, as the pre-operative processes get everything done in one single admission.

The unexplained and unknown, probably fear of non-existent or notional complications of surgery and thereafter, is considered more at home than in the hospital. Or the belief, that a hospital stay is 'safe' till complete recovery, is the idea sold to the patient and their relatives since time immemorial. This idea is so deeply ingrained by the medical fraternity, probably based on misguided facts, that we are now struggling to change it to the contrary.

Healthcare managers

For successful Day Surgery, especially laparoscopic surgery, early scheduling is considered ideal in most cases. In a stand-alone centre, kick starting the day is challenging for even the most efficient managers. The fear of last minute cancellation and rescheduling of cases can be a daunting task everyday. Training of staff and expecting super-efficiency, is again, not easy.

Protocols followed

Patient Selection: most centres follow a simple Patient Selection criteria based on western information. ASA 1 and 2 are usually selected as suitable for Day Surgery. These patients are medically and anaesthetically suitable for discharge on the same day as they are normal or near normal, with or without medication.

Age limit is 65 years, considering them to be 'young', mentally and physically, so as to be able to take care of themselves in the post-operative, recovery phase, without being overtly dependent on healthcare personal or 'responsible adult' at home. In any eventuality, presence of a responsible adult definitely makes it easier for monitoring the patients' recovery and make sure that the medication and diet is kept under reasonable control.

Telephone access was noted down in the patients' pre-op assessment chart earlier, that is, several years ago, this has become virtually redundant with the rapid advancement of information and technology all over the world.

To be on the safe side, the presence of private mode of transport or at least easy accessible public transport, round the clock, is a value add to patients' safety for obvious reason. In case of an emergency, transporting the patient to the hospital or the nearest medical centre, can be crucial.

Distance from a Day Surgery Centre is significant in case of major cases, where, same day travel, could be strenuous to the patient. Therefore, keeping in mind patient comfort, 20 km has been taken as the outer limit for such cases. Also, it will also reflect the time taken for the patient to reach the hospital, if necessary, for an emergency. In fact, with consideration to the magnitude of the surgery, every patient should be with driving distance from any medical facility.

Investigation should be done in the immediate pre-operative days, as validity may change over time. Routine investigations performed are the haemogram, along with liver function test to rule out active hepatic function derangement. Ultrasonography, especially of the common bile duct, should suffice, except in exceptional case of borderline increase in the diameter of the CBD, mandating an MRCP with CBD clearance if necessary, pre-operatively. Importance of blood tests, Cardiogram and Chest X-ray is in relevance to the General Anaesthesia that is required for Lap Chole.

Discharge: what was found important from the literature was the mention of intra-operative findings by the surgeon. No intra-op complication was encountered by the surgeon; therefore, patients can be discharged on the same day. The other criteria looked into were PONV, or absence of it. Minimal or controlled pain, ability to walk to the toilet and able to dress himself/herself, as being important to signify that the patient is on the way to recovery and will be able to manage most of the routine activity without being dependent on a care giver at home. Confidence of going home is also considered as one of the criteria for discharge. Our criteria for discharge are therefore, satisfactory; the discharge parameters, based on published criteria, also appear to be reliable [4].

Average discharge time was 8 hrs. +/-2 hrs. A routine phone call the next day, by one of the staff, was a routine followed in all cases, the outcome noted and reported to the surgical team. Additionally, pilot studies have demonstrated a 4 to 6 hours observation interval to be sufficient to detect early complications [5].

Cause for cancellation

Among the various causes of cancellation of a Day Surgery case, or the conversion to inpatient, we have found the following reasons to be surprisingly frequent:

- Non-availability of recovery beds. These were due to the spill over of inpatient cases on to DS recovery beds. Delay in discharge of previous days surgeries which had to be converted to inpatient, was also seen on some days.
- Patient not showing up for surgery, this was one of the most distressing reasons with the whole team waiting and patient, for reasons only known to them, decides to cancel the surgery and 'forgets' to inform the hospital.
- In some cases, patient turns up for surgery, but is not fasting, as there has been a communication gap and patient has understood differently. Leading to delay in the surgery and/or rescheduling, wasting valuable time.
- Shortage of staff, especially nurses, are one of the issues in some major hospitals and the most to get affected are the DS cases.
- A busy surgeon or anaesthetist, usually stuck in an emergency case, can delay the start of DS cases for that day. Therefore, scheduling of cases and staff, need to be managed for efficient running of the Centre.
- Delay in starting of cases on the day of surgery, upsetting the list, can cause delay in discharge and hence converted to inpatient with overnight stay, in some percentage of cases.
- In a developing country like India, with out-of-pocket expenditure for health care being around 80%, a delayed appointment for surgery, can see a change in the financial status of the patient. That is, money, however little it may be, may be required to support another urgent expense, leading to delay or postponement of routine and planned surgical case. This can happen without notice; therefore, patient may not be aware of the eminent, expenditure.

These causes of delay are usually seen more in Public hospital than Private ones, due to over work, less staff and casual approach.

Re-admission

The biggest issue for any DSC is to tackle overnight stay or re-admission. In our review, we found conversion to open surgery as the

most common cause. This is because of undiagnosed adhesions from previous cholecystitis, which were treated as an 'acidity' attack. Most of these patients take self-medication and avoid a visit to the GP or any investigations. During history taking, if it is revealed that there have been several dyspeptic episodes then adhesions should be taken into consideration. Bleeding during surgery, doubt of CBD injury and anomalies of the biliary tree, are the other reasons for conversion to open surgery. Surgery on the inflamed gallbladder carries a much higher risk of conversion to the open procedure, due to the difficulty of identifying the common bile duct, the cystic duct and the cystic artery in an inflamed operative field. In addition, a really inflamed gallbladder may be more technically challenging to the surgeon and may result in a prolonged operative procedure, although this will not inevitably result in an unplanned overnight admission [6].

PONV, is a problem world over, as the patient is under general anaesthesia, some patient do not respond to basic medication for PONV and have to be kept nil-by-mouth for a longer time with IV fluid support. Changes in anaesthetic practice would seem to make day-case laparoscopy a more acceptable procedure than previously reported [7].

Instillation of drains in the operation site due to spillage or bleeding, will definitely warrant that the patient is admitted for overnight observation.

Therefore, any intra-op eventuality that causes some type of concern to the surgeon, should be observed overnight, is the dictum followed.

Shortcomings

DCLC is not an established norm for treating Gall bladder stones. Surgeons and patients, in general, still would like to stay in the hospital for 24 hrs or more. Though this is being changed to 12 hrs or 23 hrs stay, it will still take a few years to become the norm.

Another major concern is lack of standardisation of treatment across the nation. It varies from centre to centre, surgeon to surgeon and city to city. Such variable treatment offered usually confuses the patient and in absence of standard protocol, pushes the patient indoor to be on the 'safe' side.

There is very little data which can establish safety and efficacy of DCLC as a norm. Most of the literature is based on western data. Whatever little data that we see published is on individual experiences and not a validated model or a case-wise standard protocol.

Several published studies have testified to the safety and feasibility of day care laparoscopic cholecystectomy (DCLC). These reports, however, emanate from developed countries with well-established norms for day care surgery with rigorously monitored outcomes [8–13].

We have too little data as of now to set standards of treatment for DCLC.

Summary

To summarise, under developed healthcare system, low literacy rates, marginal difference in the cost of indoor LC versus DCLC, have dogged the progress of Day surgery itself in the country.

To add to this, poorly developed communication system, lack of proper transport facilities in the rural areas, along with absence of organised referrals, make it near impossible to promote Day Surgery. Day care laparoscopic cholecystectomy under general anaesthesia is

feasible and safe and can be practiced in uncomplicated symptomatic cases of benign gall bladder pathologies [14].

There has been some progress made, but on individual basis. There will be a long wait before DCLC will be the gold standard, so to speak. However, published work from other developing countries have been encouraging and have increased safety and feasibility of DCLC by improved case selection [15].

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