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## **Editorial:**

The 12<sup>th</sup> edition of our Journal has varied articles. We start with the question of ‘Do we need Day Surgery?’, but I am sure once you have read the first article on Status of Day Surgery, you will not think twice. Millions will benefit and save money and time, by availing the facility of affordable surgery. These can be easily taken to rural India, it just needs political will.

Ectopic breast tissue is not rare, but, to be able to identify, diagnose and treat several such cases, is commendable. Especially when you are able to convince the patient to go home on the same day! Then of course, Kerala is the most educated state. That should be helping Dr. Menon!

I had written earlier, about the commendable work, done by Dr. Rawlani in Chalisgaon and now Nasik. These are second tier cities in a typically rural Maharashtra, to be able to perform such numbers, you have to be really dedicated and devoted to your work. Keep it up!

What we need, in the urban set-up, is Multi-speciality Stand-Alone day surgery Centres. Affordable surgery, usually routine, sometimes, emergency in the form of localised abscess or diabetic gangrene, benefit from these specialised Centres. To establish and follow Protocols and see their results, over a period of time, is worth the effort.

Advance Arthroscopic surgery has been the most commonly performed surgery by Orthopod colleagues, all over the world. It is heartning to see the initiative taken by Dr. Roshan Kumar in India too. I am sure, the anaesthetist, Dr. Rangalakshmi and her team, are the support behind the success of this endeavour. Dr. Praveen has done well in compiling and analysing the data. Hope this will spread to other cities and be encouraging to other branches.

Personally, I have always encouraged innovation and given my support to any logical approach in patient treatment, Dr. Pathak from Jabalpur, has once again done great work on Inscisinal hernias. Good going Sir!

Another paper sent by Dr. Warkhede, also from Jabalpur, has done a comparitive study on a common, but, intreguing topic of Fissure-in-ano, worth a read.

We have reached a stage where progress in Day Surgery is now evident. More and more patients and Surgeons are opting for Day Surgery actively. I would encourage you to be part of this growth, by joining us and sharing your experience.

Happy reading!

**- T. Naresh Row**

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# Status of Day Care Surgery in India.

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## Abstract:

Overcrowding has become synonymous with urban living everywhere in the world. More so in a developing country like India. A population of over 1.3 billion, skewed bed patient ration and the ever increasing cost of healthcare, inspite of a robust increase in the per capita income of individuals, has health care providers wondering as to where this is going to stop. Day Care Surgery fits the bill. Making planned, non-emergency surgeries affordable. This has worked well for western countries since the past 100 years. (1) They have gradually, but surely, shifted to Day Surgery in extracting the maximum benefit it has to offer. This is a concept which encompasses the patient, hospital, healthcare providers and financial resources of the country.

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## Problems:

Population of India has increased to about 1,312,457,832 at the last projections. (2) It is predicted to overtake China in the years to come. A tremendous strain is put on the limited and expendable resources that the country has to offer. Basic civil rights of Food, Water and Shelter has extended to include Education and Health.

Distribution wise, ours is a predominantly rural population, about 68.84%. (3) Here, there are issues of reaching modern health care gadgets and providers. Remote areas, difficult to access, lack of infrastructure and poor doctor-patient ration makes it difficult to care for these patients. This is compounded by poverty and lack of education. The exodus is to urban cities, which provide the basic health care needs of these population, which are expensive and overcrowded. Our urban population is 31.16%, but limited resources has increased the cost, making it unaffordable for most patient. Out of the urban population, 60% live in poor housing and slums or congested living quarters, where infections and illnesses are part and parcel of your daily struggle.

Even though, the per-capita income of an average family is around Rs. 7,769.25/-, (4) the 'Cost-of-living', which literally means the cost of staying alive, is so high, that there is nothing left for health care.

An ever widening ratio of Bed: Patient, has now increased to 1:1860. (5) There is a belief that it is actually close to 1:2000. Therefore, making it difficult to procure beds in case of an emergency due to ill health. WHO recommends 5:1000 Bed:Patient ratio (6) as an ideal bed-patient ratio, which may now seem impossible to achieve.

## 'India is on a sick bed':

A leading newspaper carried the above banner, listing statistics which would make every conscious healthcare provider to sit up and take notice. Some of these issues are elaborated below, though many, are out of the preview of this article.

The expenditure on health care is summarised as follows: 60% of population avail the Public healthcare system, here, they incur an expenditure of 18% of all the financial resources spent by them, per annum. Whereas, 82% of expenditure is incurred by the private sector, which caters to 40% of the population. Similarly, expense on healthcare by the government is a dismal 1.28% of the GDP, as compared to 3.72% of GDP spent by the private sector. Making a total of 4% spent on healthcare, in a country of this large a population. Comparatively, a developed nation like USA, spends 8.1% of its GDP on health, with a population much smaller. (7)

Ours is a country where 'out-of-pocket' expenditure for health care is above 85%. Leading to borrowing and selling of assets to make payments for health services. (8) Pushing the already poor family to below poverty line. Making India one of the most privatised healthcare systems in the world. A rough estimate puts a figure of 39 million people, being pushed below poverty line, every year, due to individual spending on health care needs.

A recent study of the financial stress placed on population has revealed that, 30% rural patients refuse treatment due to the unaffordable cost, 20% urban patient population do the same. 47% rural patients have to borrow or sell assets to meet cost of health services. Whereas, 31% rural patient population do the same. Health indicators peg the cost of healthcare to triple in the next 15 years. (9) Therefore, affordable healthcare, is the crux of all that matters after Food, Water, Shelter, and Education.

Overcrowding is another major issue faced in urban life. Be it a train station or road traffic, congestions, it frustrates you no end. Similarly, public hospitals are unable to cope up with the work that they have, mind you, we have large hospitals catering to 1500 to 3000 indoor patients, but, the influx is overwhelming, from the city and from the distant rural areas.

Routine, planned surgeries take a back seat in such situations and appointments are given for 3 to 4 month later. In such a situation, patient is ready to pay for the surgery, but, with limited resources, may not be able to afford corporate hospital facilities. Therefore, planned, non-emergency surgeries can be easily performed in Centres with basic amenities. They can be utilised as Day Care Surgery Centres. This will not only decongest hospital, but will be well within the reach of the patients too.

### **How is it possible?**

There is no compromise as far as the safety of patient-care is concerned. The cost of setting up a centre and a hospital, is very different. In the sense that, infrastructural cost and running cost varies tremendously. The major difference is in the attitude of the management. Also, while planning a, say, 100 bedded hospital, we look into aspects of certain amount of space per bed. The type of bed, equipment around the bed and the staff or medical personnel looking after you.

As far as the equipment is concerned, an example can be given of procuring an anaesthesia machine. They range from Rs. 75,000/- for a very basic machine to Rs. 30/- Lacs for a cardiac work station. But, as a Day Surgery unit, what are the types of surgery that you want to perform?

Certainly not cardiac cases, so the cost of the anaesthetic machine can be reduced appropriately, thus reducing the cost of the set-up. Therefore, the nature of cases that you plan to handle in your set up defines your investment cost, and thus, the overall investment for the centre.

Similarly, if your centre is predominantly Day Surgery, then, the night staff can be reduced to bare minimum. This will help in cost cutting too. There is no reduction in the cost of consumables such as anaesthetic and lifesaving drugs, which have to be of the same standard in any set-up. But, the willingness to pass on the cost benefit of these material to the patient, makes the difference. Most hospitals add some form of surcharge over and above the basic cost, which make it profitable to them, but expensive to the patient. Mind you, we all are working professionally for the sole purpose of alienating and alleviating disease. Charity comes naturally to us, but, not all the time. There is a strong belief, and a good working model for any business, that charity comes out of earning. So, earn we must. How much? That is the question.

### **Awareness**

Or lack of it, is the most commonly faced hurdle by every surgeon. As it is, it is difficult to convince the patient and their relatives to undergo surgery, in most situations, then to expect the patient to be released on the same day of 'Surgery' can be frustrating for a physician and his staff to explain. Sometimes, it works the other way round, when a patient is reluctant to undergo surgery due to the fact that he will be home, recuperating, rather than admitted for a few days in the hospital, he may well agree to undergo the procedure as Day Surgery!

So, counselling is very important to overcome this hurdle and educate doctors as well as patients.

The Indian Association of Day Surgery came into being in 2003. A few like-minded surgeons, came together, on a routine day, to establish the organisation. With the sole aim to extoll the benefits and virtue of Ambulatory surgery and help its establishment.

ADSCON 2005 (Association of Day Surgery Conference), as it came to be known, was our National Conferences, initially, we had it once a year, then it was changed to once in two years, to alternate with the IAAS Congress, of which, we became a member and thus, have been holding biennial conferences since. ADSCON 2016 would be our 8<sup>th</sup> National Conference.

Till a few years ago, there was no concept of Day Care Sur-

gery, it was only happening abroad. Then started our Ophthalmic surgeons, who managed to send more and more cases on the same day and then in few hours. Even insurance companies who disbursed Medical insurance, which had just started in India, insisted on 24 hospitalisation.

It took us several years to convince them to accept the benefits of the concept. Four years of correspondence with IRDA and the insurance companies, which has now lead to acceptance of Day Care Surgery as it is, that is, without 24 hours admission.

Most Ophthalmic surgeons had their own single speciality Centres, which worked for Day Care Surgery, then came along other single speciality centres in Surgery, Plastic Surgery and some ENT surgeons. These were successful to a certain extent as there were not many major surgeries being performed. Most were done under local blocks or under short G.A. Many doubled as a Nursing Home and were managed by a doctor couple. What was the need of the day, is to have a Stand-alone, Multi-speciality, Day Surgery Centre. Where, more than two of the surgical branches, would be offering Day Surgery. And true to the concept, it would be more affordable than admitting overnight.

Over the decade, 8 National Conferences were held in different Medical College Hospitals and Cities outside Mumbai. These Conferences were organised by members of the Association in collaboration with local bodies. The International Association for Ambulatory Surgery (IAAS) made its presence through its representatives, who attended these meetings regularly.

Our participation in the IAAS Congress, organised in different parts of the world, began with invited/guest lectures, then, as Corresponding Member, followed by Full Membership. Here, two representatives from our Association were nominated to the General Assembly of the IAAS, hereby, making us part of an International organisation, which made policies on Day Surgery. It was then possible for us to preview to the insights of Day Surgery, from all over the world, which could be moulded to our situation and utilised for the betterment of Day Care Surgery in India.

During the first National meet, we were able to launch our own annual issue of Day Surgery Journal of India. (10) This Journal was unique in the sense that it was the only scientific magazine in India of its kind. Initially, we had articles, which were invited, from all over the world. Slowly, by the time the 10<sup>th</sup> issue was published, we had articles, all authored by our own members. Thus creating another platform for sharing and learning.

Most of the events are hosted on the website, [www.daysurgeryindia.org](http://www.daysurgeryindia.org), which has journal, newsletter and the details of lectures/Orations, Conferences, publications and activities of the Association, which is periodically updated. (11)

At the same Conference, during ADSCON 2005, a book-let on Protocols was released, it has, in brief, guidelines proposed by the Association, for patient selection and safety. (12) This book-let, drew its brief from the prevailing International Protocols, modified to suite the Indian situation. It was intended as a guide to members who wanted to start Day Care Surgery, who wanted to improve their existing practice, and/or set up their own Day Surgery Centre.

Special issues of Bombay Hospital Journals were Guest edited by senior members of the Association, which carried articles from different authors pertaining to Day Surgery in their specialities. These Journals have a large circulation and are available on-line also. (13)

One Day Surgery Times, a monthly Newsletter, began its publication and circulation among the members of the Association, all Medical institutions of the country and locally, in Mumbai, to select General practitioners, in a process to increase awareness at grass root level. It is a single page newsletter with articles and events on Day Surgery from around the world. Including, as to what surgeries that are possible and how to go about it. (14)

‘Handbook for Day Care Surgery’ was published in 2014, a comprehensive guide for everyone who is interested in Day Care Surgery. It deals with the protocols in detail as well as, with check lists including a chapter on ‘Mediclaime’ processes. (15)

Regular workshops in General Surgery is being conducted in different parts of the country, namely, Mumbai, Amravati and Nagpur. With demonstration of routine cases under short General Anaesthesia and/or Local blocks and sedation. This entails initial work up of patients by the local doctors and press interviews on a regular basis, in leading local and national newspapers.

In fact, the concept became so popular with the journalist, that several interviews were published in leading national newspapers on Day Care Surgery, with feedbacks of patients and the advantages it can provide as compared to indoor patients.

There were several invitations for lectures from almost all the broad speciality organisations, as well as, social clubs like Rotary and Lions clubs, who wanted to know more



about Day Surgery. The response was very encouraging. Patient information brochures on Day Surgery is distributed extensively, with a brief write-up on Day Surgery and its possibility in form of a 'Q & A' format.

## Changes

Over a period of almost 12 years, we have now gradually seen changes to the acceptance Day Surgery. From single speciality Day Surgery Centres, restricted to Type 'A' cities, we now see them in Type 'B' and 'C' cities. Multispecialty Day Surgery ward/unit have flourished as part of a large corporate hospital, mostly in private sector.

In around 2007, a Stand-alone, Multi-speciality Day Surgery centre came into being in the city of Mumbai. It is first of its kind, providing Day Care Surgery in 7 major surgical Speciality. ISO 2008 Certified and Graded 'Optimum' by FEQH, an Accrediting body of QCI. The Centre uses the Standard Operative Procedures (SOP) based on the Protocols recommended by The Indian Association of Day Surgery and The International Association for Ambulatory Surgery. (16)

Several chains of Day Surgery Centres (DSC) have now come up in different cities, which are DSC per say, run by corporate management. They are accredited and some are associated with larger hospitals. Leading Corporate hospitals have department of Day Surgery or Unit, which caters to patients ranging from blood transfusion/chemotherapy to Major Ambulatory surgeries. The benefits passed on to the patients availing these facilities are definitely economical than a tertiary hospital.

This is a beginning, with time, will come the necessary change. In time to come, inclusion of Day Care Surgery in teaching program in Medical Colleges and establishment of DS units in these teaching institutes, will change the way healthcare is provided making it affordable to all.

It will lead to overcoming all difficulties of shortage of beds, waiting lists, hospital acquired infection, waste of man-hours and economical healthcare system, in both, Public as well as Private sectors in our country.

## In summary

Day Care Surgery Centres have been around for over 100 years. They have grown from strength to strength. Changing several myths about surgical care for non-emergency/ planned, secondary cases, reducing the hospital stay to one working day. Affording several advantages to all concerned, making healthcare, especially surgery, a not so daunting task.

In a developing country like India, the more we do to make healthcare within reach of our patients, the less it is. The world has enjoyed the benefits of Day Surgery for over a 100 years, it is time we should do so too.

Has our efforts made a difference? Yes, it has. We still need to continue our combined effort until One Day Surgery becomes the norm in India.

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# Ectopic Breast Tissue in the Axilla – A Personal Experience

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## Abstract

During the March 2015 to December 2015, 63 patients consulted for breast problems.

Out of which, 9 patients had axillary breast tissue one was a bilateral swelling, the rest were unilateral.

The reasons for which the patients consulted me were: total 10, axillary swellings in 9 patients. All were subjected to breast ultra-sonogram or sono-mammogram. Ectopic breast tissue was identified only in 4 cases. 8 patients were symptomatic and two were asymptomatic. 6 axillary swellings from 5 patients were removed surgically. One patient developed seroma on Left side which eventually subsided. Out of 5 patients operated, 4 cases were done as day procedures. 1 case with bilateral axillary swelling needed drainage on one side this patient was admitted for 3 days. All 6 specimens were reported positive for breast tissue by the pathologist

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## Introduction

Axillary ectopic breast tissue is not uncommon entity. The incidence varies with different ethnic groups. It is found to be more in American Indians and Asiatic populations. In Asia Japan has reported a high incidence. In India unfortunately we do not have enough reported data to comment on the incidence of axillary ectopic breast tissue. The Indian women, especially in South India, usually wear the upper garment with sleeves. Since the axilla is covered in most women cosmetic anxieties are less. However with the changing mores in dress design, the sleeves are vanishing fast. With this popularity of sleeveless dresses, the axillary fullness or swelling is now a cosmetic issue. Another reason is the articles published in the various magazines and newspapers has considerably raised the breast cancer awareness, and levels cancer related anxieties. Both these factors bring more women to the surgeon's consultation rooms. This is the reason for higher pick up axillary breast tissue and its surgical removal.

In a 10 month period, between March 2015 and December 2015, 63 women consulted for breast problems. Out of this 9 patients came to discuss regarding swellings in the axilla. Many of them had it for long periods.

Reasons for surgical consultation:

- 4 patients had pain in the in the swelling and engorgement during menstrual cycle.
- 3 patients reported the swellings were uncomfortable and

it was difficult to wear upper garments with sleeves, and restriction of arm movement.

- 2 patients came because they wanted to rule out cancer.

The patients were between 27 years to 53 years old.

All the swellings were separate from the Tail of Spence, clinically.

All patient were advised ultrasonography of both breasts and axilla. 3 patients opted for Sono-Mammogram.

- 2 cases were reported as hypertrophic tail of Spence.

- 3 cases were reported as pad of fat. One case was reported as malignancy of the accessory axillary breast tissue (mammogram) the other 4 cases have been reported as ectopic breast tissue (44.44%). The oldest patient had a Birads V lesion. FNAC reported highly invasive ductal carcinoma.

Excision of 6 axillary swellings were done in 5 patients. One patient presented with acute pain immediately after delivery. This patient was treated with analgesics and advised excision after lactation. The patient with proven carcinoma preferred to go to the Regional Cancer Centre for further management. Though willing for surgery, the remaining 2 patients who had no obvious discomfort decided to postpone surgery to a later date.

The patient with bilateral ectopic axillary breast tissue,

developed seroma in the right axilla which eventually subsided in 3 weeks' time. This side had a large swelling, and had to be drained with a suction drain.

All other patients did not have any complications, and had uneventful recovery.

All excised swellings were sent for histopathological examination and all 6 were reported as breast tissue.

4 cases were done as day cases discharging them within 24 hours. The patient with bilateral axillary breast tissue was admitted for 3 days as the right axilla swelling was large.

Patients have been followed up for 2 months to 6 months. They are still under follow up.

## Discussion

### Terminology<sup>1</sup>

- Polymastia: glandular breast tissue in an organised ductal system, communicating with overlying skin. (.22% -0.6%)
- Polythelia: accessory nipples and/or areolae. The presence of an areola only or patch of hair only may be further categorised as Polythelia Areolaris and Polythelia Pilosa, respectively. (Most common incidence 2%-10%)
- Aberrant breast tissue: disorganised secretory tissue, unrelated to overlying skin.

### Embryology

At 5 weeks of embryonic life, mammary streak starts developing in the embryonal ectoderm and extend from axilla to groin. By 7<sup>th</sup> week mammary ridge (milk line) develops and proliferates as a primary mammary bud. This starts growing downwards in to the dermis as a diverticulum. At 10<sup>th</sup> week the primary bud begins to branch, giving off secondary buds by 12<sup>th</sup> week. This will finally develop in to lobules of the adult breast. Further differentiation in to breast parenchyma will go on till the gestation ends. (2). the milk line usually regresses, except in the pectoral region. Incomplete involution of the milk ridge can lead to ectopic breast tissue (EBT)<sup>2</sup>

Accessory breast tissue can be found anywhere along the milk line. But it can also be rarely found outside the milk line. 60% to 70% of Ectopic Breast Tissue (EBT) are found in the milk line in abdomen or thorax. Out of these 20% EBT are seen in the axillae.<sup>1,3,4</sup> ectopic breast.

EBT has also been reported from face, shoulder, buttocks, hip posterior and lateral thigh, back even anus.<sup>1,6,7</sup> These EBTs are known as 'Mammae Erraticae'

## Incidence

Most authors from the west have found the incidence 2%-6% in women and 1%-3% in males.<sup>1,3</sup>

EBT can occur per se in a patient, but it has been noted to occur in families<sup>1,8</sup>

EBT is seen more in Asiatic populations. Highest percentage reported from Japan 5%<sup>8</sup>

Cancer in the ectopic axillary breast tissue is higher than pectoral breasts 0.2-6 %

Kajava classification of EBT proposed in 1915 by Kajava .Y.<sup>(5)</sup>

Class I consists of a complete breast including glandular tissue, nipple, an areola.

Class II consists of only glandular tissue and nipple, without areola.

Class III consists of only glandular tissue and areola, without nipple.

Class IV consists of only glandular tissue.

Class V (pseudomamma) consists of only nipple and areola, without glandular tissue.

Class VI (polythelia) consists of only the nipple.

Class VII (polythelia areolaris) consists of only the areola.

Class VIII (polythelia pilosa) consists of only hair.

Symptoms axillary swelling, cyclical pain and increase in size of the mass, thickening of the axilla and irritation and sometimes inability to wear sleeved upper garments

## Diagnosis

The ectopic breast tissue is diagnosed with sonogram, mammogram or both. There is defined criteria for diagnosing EBT. Many of the sonologists fail to identify EBT. In my experience they have failed to identify breast tissue consistently. Perhaps inexperience in this field may be the reason. Fine needle aspiration cytology or core biopsy has also been found to be useful. Core biopsy should be done under US guidance. I now feel every patient of suspected EBT should have cytological or tissue diagnosis before excision.

Behaviour of axillary EBT

EBT can develop all the hormonal complications that may affect the normal breast tissue like abscess formation, mastitis, milk fistula, cyclical mastalgia, cysts, fibroadenomata, fibroadenosis, hamartomas, phyllodes tumours, different types of cancers affecting the normal breast.

Malignancy of axillary EBT is reported as 02 % 0.6 %. Infiltrating ductal cancer is the most common finding this about 79 %. Axilla is the most common site for malignancies of EBT 59-91 % has a very poor because the lymphatics of the axilla aids fast spreading to distal sites.<sup>1, 8,9,10</sup>

The axillary EBT malignancy appears to have a poorer prognosis than cancer in pectoral breasts because the cancer metastasises to lymph nodes more frequently and rapidly than that in regular breast tissue.

### Management options

In the past, general practitioners and even gynaecologists never bothered to evaluate axillary swellings in women, even if they were symptomatic. They were dismissed as fat. I have come across patients having cyclical pain and engorgement of axillary EBT being told to ignore it. There are enough reports of various problems developing in axillary EBT including different types of cancers.

The use of sleeveless upper garments by women are still uncommon in Kerala in particular and generally in South India. This may be the reason why people tend to ignore axillary swellings.

With the changing mores of fashion, and increasing awareness of breast cancer in the middle and upper class women, more and more women want evaluation of the axillary swelling by a specialist surgeon.

In 2003 a study in British Journal of Surgery by Down and others found high complication rate in their retrospective analysis of electronic medical records of 28 cases. 11 out of 28 patients had complications (39%) which is very high. However they recommended surgical excision of axillary EBT<sup>11</sup>

However present view is that if removal of EBT with acceptable complication rates are possible<sup>11</sup>

The present trend is to remove the axillary ectopic breast tissue with excision, liposuction or both. In patient with concomitant macromastia, reduction mammoplasty and excision of ectopic breast tissue can be performed with no additional morbidity<sup>11, 12</sup>

A new algorithm is proposed in 2011 by American Association of Plastic Surgery for the treatment of Axillary Breast tissue. (Table 2) It is worth considering.

### Conclusions

Axillary ectopic breast tissue is not uncommon.

Very often many doctors dismiss it as trivial and do not evaluate the swelling. This is unacceptable.

The axillary breast tissue can have all the problems associated with normal pectoral breasts.

Removal of the axillary breast tissue is quite safe, and should be recommended since:

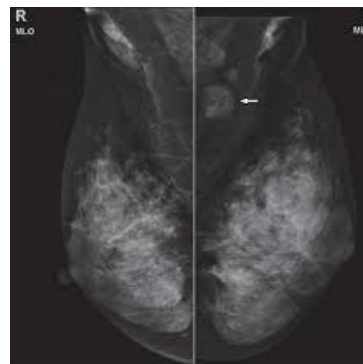
- Cyclical engorgement and pain of the EBT can be relieved by surgical excision
- Malignant change is real possibility in EBT and malignant potential of axillary EBT is more than pectoral breasts

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**Table 1: Overview**

No of patients	9
Women	9
Male	0
Age group	27-53
Unilateral	8
Bilateral	1
Symptomatic	5
Asymptomatic	2
Positive imaging report	4
Operated	5
Complications	1
Uncomplicated recovery	4
Postponed surgery	2
Histopathologically proved EBT	5



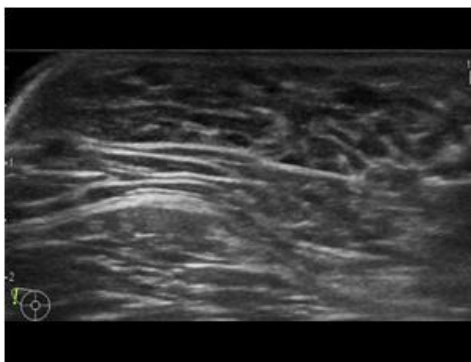
**Sonomamogram**

**Table 2: Treatment Algorithm American Society of Plastic Surgeons 2011**

Type	Features			Treatment
	Size	Excess skin	Distinction from normal breast	
I	Barely visible	None or little	+/- central core	Direct excision without removal
II	Small mass	None or little	Contiguous	Suction lipectomy
III	Visible mass	Present	Contiguous	Suction lipectomy +skin excision
IV	Large mass	Present	+/- central core	Surgical excision of skin tissue+ suction lipectomy



**'V' sign**



**USG Axillary Breast Tissue**



**Surgical pictures**

# Day Care Laparoscopic Surgery.

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## Introduction

Day care laparoscopic surgery is major ambulatory surgery wherein an operated patient recovers after surgery and is fit to go home within a day or 24 hours. Day care laparoscopic surgery is a continually evolving speciality performed in a range of ways across different units. In recent years, the complexity of procedures has increased with a wider range of patients now considered suitable for day care laparoscopic surgery.

Appropriate accreditation, safe anesthesia protocols, and proper patient selection constitute the basis for safe and efficacious day care laparoscopic surgery. Day care surgery has several potential benefits over hospital-based surgery, including cost containment, ease of scheduling, and convenience to both patients and surgeons.

## How does Daycare laparoscopic surgery work?

In Daycare laparoscopic Surgery, trained daycare surgeons perform surgery using hi-tech, precision equipment designed to minimize pain and accelerate healing. Laparoscopic methods involve video-assisted surgery through a very small cut (often as small as 5mm to 10 mm) in the body. These techniques cause minimal secondary damage to the body, and thus result in faster healing. Special anesthetic techniques are used to minimize pain during and after the procedure. Patients are able to return back to their normal activities much earlier than traditional surgery.

## Daycare laparoscopic surgery is safe

A daycare procedure is performed only after thorough planning and evaluation of the patient by a qualified, daycare-trained doctor. The patient's condition is evaluated and monitored after the surgery by the doctor and trained staff, and a discharge is done only if the doctor certifies the patient as fit for discharge.

## Protocol in day care laparoscopic surgery:

A multidisciplinary approach, with agreed protocols for effective patient assessment including inclusion and exclusion criteria for day surgery and protocol-driven, consultant/nurse-led discharge are fundamental to safe and effective day care laparoscopic surgery. (1)

## Selection of patients

It is now accepted that the majority of patients are appropriate for day care laparoscopic surgery unless there is a valid reason why an overnight stay would be to their benefit.

Patient assessment for day surgery falls into three main categories:

Social factors (a) The patient must understand the planned procedure and postoperative care and consent to day surgery. (b) Following most procedures under general anaesthesia, a responsible adult should escort the patient home and provide support for the first 24 h. (c) The patient's domestic circumstances should be appropriate for postoperative care. Medical factors (a) Fitness for a procedure should relate to the patient's health as determined at pre-operative assessment and not limited by arbitrary limits such as ASA status, age or BMI (2-3). (b) Patients with stable chronic disease such as diabetes, asthma or epilepsy are often better managed as day cases because of minimal disruption to their daily routine. (c) Obesity per se is not a contraindication to day surgery as even morbidly obese patients can be safely managed in expert hands, with appropriate resources (4).

Surgical factors (a) The procedure should not carry a significant risk of serious complications requiring immediate medical attention (hemorrhage, cardiovascular instability). (b) Postoperative symptoms must be controllable by the use of a combination of oral medication.. (c) The procedure should not prohibit the patient from resuming oral intake within a few hours. (d) Patients should usually be able to mobilize before discharge.



## Pre-operative preparation

All patients must be assessed by a member of the multidisciplinary team trained in pre-operative assessment for day surgery. Pre-operative preparation is best performed within a self-contained day surgery facility. (5-7)

Pre-operative preparation has three essential components:

1) To educate the patients and carers about day care surgery pathways.

2) To impart information regarding the operative procedure and postoperative care to help patients make informed decisions – important information should be provided in writing.

3) To identify medical risk factors, promote health and optimize the patient's condition.

One-stop clinics, where pre-operative preparation is performed on the same day as decision for surgery, offer significant advantages.

## Management and staffing:

Individual units should formulate a staffing structure that takes into consideration local needs.

Every day surgery unit must have a Clinical Lead (usually a consultant anaesthetist) with specific interest in day surgery. The Clinical Lead should be supported by a day surgery manager (usually a trained nursing staff). Many units favor multiskilled staffs that have the knowledge and skills to work within several different areas of the day surgery unit.

## Facilities:

An ideal setting for day care laparoscopic surgery would be hospital based, supported by well equipped operation theatre, recovery room, postanesthesia care room and specially trained staff. It should have its own reception, consulting rooms, together with administrative facilities. (8)

In addition a strong social backup with satisfactory transport and telecommunications system and involvement of family physician is desired. [8]. The operating theatre and first stage recovery areas should be equipped and staffed to the same standards as an inpatient facility, with the exception of the use of trolleys rather than beds. Several patients per day can occupy the same trolley space, providing far greater efficiency than on wards where one day case may occupy a bed for a whole day. Car parking or short stay drop-off and pick-up areas should be provided adjacent to the unit.

Typical day unit opening hours would be 07:00–20:00, but with the increasing complexity of surgery many units now open until about 22:00.

## Day surgery for urgent procedures

Patients presenting with acute conditions requiring urgent surgery can be efficiently and effectively (9, 10) Essential components of an emergency day surgery pathway are:

1 Identification of appropriate procedures.

2 Identification of a theatre list that can reliably accommodate the procedure (e.g. a flexibly run emergency theatre list).

3 The condition must be safe to be left untreated for a day or two and manageable at home with oral analgesia (standardized analgesic pack for the patient to take home).

4 There should be provision of clear pre-operative patient information, ideally in writing.

## Anaesthetic management:

Surgical approach varies according to the type of laparoscopic procedure. Carbon dioxide insufflation with intraperitoneal pressure from 8 to 12 mm Hg is recommended for laparoscopic surgery. Infiltration of Bupivacaine at port sites before the incision is recommended. Decompression of the abdomen rigorously after laparoscopic procedure reduces the need for postoperative opioids. (11)

A standard anesthetic, analgesic and antiemetic protocol can be used for day care laparoscopic surgeries like appendectomy, cholecystectomy. Regular monitoring of hemodynamic parameters including pulse rate, blood pressure, oxygen saturation, ETCO<sub>2</sub> and electrocardiogram is mandatory.

The risk of postoperative sore throat can be reduced by using the laryngeal mask airway (LMA<sup>†</sup>) rather than endotracheal intubation. Succinylcholine may not be a suitable choice for daycase patients, because myalgias associated with its use may delay the resumption of normal activity. Short acting non depolarizing agent like Atracurium is preferred in day case laparoscopic procedures. Among the agents available in India, Propofol and Isoflurane/ Sevoflurane have increased the ability of the anesthesiology to provide a successful day case experience. Because of the rapid onset and offset of these agents longer cases like laparoscopic appendectomy, cholecystectomy, and hysterectomy can be planned on an ambulatory basis and patients can recover quickly and can be discharged home safely. Side effects such as the “hang-over effect” can be minimized. Propofol has the additional effect of reducing PONV (post-operative nausea and vomiting) (12). Use of Ondansetron and Dexamethasone in preinduction of anaesthesia minimizes the symptoms of postoperative nausea effectively (13-14). Appropriate analgesia protocol is essential for successful discharge in day care laparoscopic surgery. Good post-operative analgesia requires planning and a multimodal approach (15). Balanced analgesia in daycase surgery commonly involves intraoperative administration of shortacting opioid such as Fentanyl, and port site infiltration with local anaesthetic at the start of surgery supplemented in the postoperative period

by an oral, nonopioid analgesic. Several studies have demonstrated early ambulation and discharge after Fentanyl anaesthetic techniques. (16) Oral / parenteral analgesics like Diclofenac, Paracetamol have a higher success. Intraperitoneal instillation of 0.5% Bupivacaine and its local infiltration at sites of port entry provides adequate postoperative analgesia and minimizes the need of other analgesic support (17-18).

### **Postoperative recovery and discharge**

Recovery from anaesthesia and surgery can be divided into three phases:

A) First stage recovery lasts until the patient is awake, protective reflexes have returned and pain is controlled. This should be undertaken in a recovery area. (19) B) Second stage recovery ends when the patient is ready for discharge from hospital. This should ideally be in an area adjacent to the day surgery theatre. C) Late recovery ends when the patient has made a full physiological and psychological recovery from the procedure. This may take several weeks or months.

It is also important to consider the patient's mental state when discharge is considered. They should feel ready to go home. Discharging the patient against his/her wishes could have serious consequences.

There are a number of scoring systems to assess readiness for discharge. These use a variety of parameters such as level of consciousness, breathing, circulation, activity level, complications and mobility.

### **Criteria for discharge:**

- (a) Stable vital parameters
- (b) No new signs or symptoms after the surgery
- (c) No nausea or vomiting
- (d) Mild tolerable pain.
- (e) Passed urine
- (f) No surgical complication
- (f) Able to walk comfortably without assistance.
- (g) A responsible escort.

Overnight stay is usually a joint decision made by the surgeon, the patient, and his attendants. As patient has to participate in self-care after discharge, their comfort, preference, and safety need to be considered in the assessment for discharge, Overnight stay should be considered in cases where recovery is not proper, patient has complications like excessive pain or vomiting, or the hours is too late in evening, and social issues (issue of transport or family not willing to go home).

Protocols may be adapted to allow low-risk patients to be discharged without fulfilling traditional criteria.

### **Postoperative instructions:**

All patients should receive verbal and written instructions regarding diet, activity, medication and wound care on discharge. Wherever possible, these instructions should be given in the presence of the responsible person who is to escort and care for the patient at home. Patients shall be asked to report in case of excessive pain, nausea / vomiting, constipation/diarrhoea, distension of abdomen, and discharge or redness at port sites.

Advice should be given not to drink alcohol, operate machinery or drive for 24 h after a general anaesthetic. Procedure-specific recommendations regarding driving should be available. (20)

All patients should be discharged with a supply of appropriate analgesics and instructions in their use.

### **Discharge summary**

It is essential to mention the type of anaesthetic given, the surgical procedure performed and postoperative instructions given.

Patients should be given a copy of this discharge summary to have available should they require medical assistance overnight. Best practice is a helpline for the first 24 h after discharge and to telephone the patient the next day. Telephone follow-up is highly rated by patients, provides support for any immediate complications, and is useful for auditing postoperative symptoms and patient satisfaction.

### **Audit**

Effective audit is an essential component of assessing, monitoring and maintaining the efficiency and quality of patient care in day surgery units. Systems should be in place to ensure the routine collection of data regarding patient throughput and outcomes. There have been a variety of tools developed to determine patient outcomes. Questionnaires, which rely on the patients' completing documentation and returning them to the day unit, are notoriously inaccurate and response rates are often very low. The most successful units collect data electronically at all stages of the day surgery process.

### **Advantages of Daycare laparoscopic surgery**

- Same - day, insurance-friendly discharge - saves hospitalization costs.
- Special surgical and anesthetic techniques aimed at rapid recovery, faster healing.
- Minimal disruption of personal life helps you return to work / life quicker.



## Daycare laparoscopic Procedures

(Rapid Recovery with discharge in 24 hours or less)

- 1) Diagnostic laparoscopy.
- 2) Laparoscopic inguinal hernia repair.
- 3) Laparoscopic umbilical Hernia repair.
- 4) Laparoscopic appendectomy.
- 5) Laparoscopic cholecystectomy.
- 6) Gynec laparoscopic surgeries like hysterectomy, oophorectomy, and ovarian cystectomy.
- 7) Laparoscopic tubectomy.
- 8) Laparoscopic unruptured ectopic pregnancy removal.

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# Multi-speciality in Day Care Surgery: an update

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## Abstract:

This article publishes analysis, retrospectively, results of 9572 cases performed over a period of 7 years at a single center, dedicated to Day Surgery. The Indian Association of Day Surgery and The International Association for Ambulatory Surgery has extensively proposed Protocols for Patient Selection, Preparation and Discharge. These were meticulously used as guidelines for all Day Care Surgery cases performed at the Center. Pre-Operative counselling was given to all General Surgery patients at the time of first consultation. Division of cases were on the basis of prospective surgery as: OPD: 2448 cases (25.57 %), Day Case: 4478 cases (46.78 %) and Extended / Short stay (upto 48 hrs.): 2646 cases (27.64 %). Results: Patient who received pre-op counselling, were more willing for Day Surgery. Therefore, General Surgery cases were the maximum. There was a zero re-admission or complication rate. In conclusion: Meticulous implementation of Protocols and Pre-op counselling by the operating surgeon, is the key to a successful Day Surgery Centre.

## Introduction:

Day Care Surgery, as it is popularly known in India, is described as a concept, which, provides planned surgeries, secondary in nature, within the same working day.

Definition of Day Surgery is: Surgeries or invasive procedures performed and discharged on the same working day. They may be done under local-regional blocks and sedation or short General Anaesthesia. These are major surgeries which require a complete OT set-up with a few hours of observation. They exclude Minor-OPD procedures and Endoscopies performed for diagnosis.

Therefore, a true Day Case is a patient who is admitted for an operation on a planned non-resident basis and who nonetheless requires facilities for recovery. The whole procedure should not require an overnight stay in a hospital bed. (1)

Thus, contrary to common belief, Day Care Surgery cases are not 'Minor' surgeries, they are Major surgeries, performed as Day Case, due to advancement in technology and availability of better anaesthetic drugs. Usually, performed in a dedicated or specialized Day Surgery Centers.

Among the three types of Day Surgery Centers (DSC) that

are known to us, namely, Departments or units incorporated in a large hospital, they may have a separate OT for Day Surgery cases or may share the main OT complex. Second type of DSC are within the hospital complex, but situated in a separate building with dedicated OT and staff. Third type is a Stand-alone center, which is a small unit on its own, not part of any hospital. These are all Multi-specialty surgery centers, catering to more than one surgical specialty, on a daily basis.

Efficiency and economics have proved, over the decades, that the third type of DSC, that is, Stand-alone DSC's are the best.

There are several definitions for Day Surgery in different parts of the world, One Day Surgery, Day-case, Ambulatory surgery, are a few commonly used nomenclature to describe Day Care Surgery. In some countries, they are extended to include a discharge process of upto 23 hours. The first proposal for a unified terminology was put forward by Roberts and Warden in 1998. (2)

Though Day Surgery has been in use in some countries. In UK, over a 100 years ago, in 1909, an article was published on Day Surgery, of 7392 children, operated in Glasgow. (3) It has gained popularity only recently, in our country. This

may be due to the fact that there is lack of awareness about Day Surgery among our doctors and patients.

With the advent of Minimal Invasive Surgery, which entails expensive use of scopes, the surgical procedures cause less trauma and tissue disruption. This leads to a faster recovery.

The Indian Association of Day Surgery and The International Association for Ambulatory Surgery have suggested certain Protocols, which are for patient selection, patient preparation, type of surgeries, discharge criteria's and minimal requirements for a DSC, which, are for the safety of patients and better efficiency of the surgical center.(4)

### **Aim:**

To establish patient safety and efficacy of Protocols proposed by The Indian Association of Day Surgery in the following types of surgery, which were analyzed at One Day Surgery Centre.

### **Material and Method:**

Place of study: One Day Surgery, Mumbai, India.

All patients, prospectively admitted for surgery, between May 2008 to April 2015, were analyzed.

Total number of cases admitted: 9572.

Category of Surgical patients:

- 1) OPD (Minor) Procedures: 2448.
- 2) Day Care Surgeries: 4478. (Table 1)
- 3) Extended / Short Stay: 2646.

### **Medical Protocols followed:**

#### 1. Patient selection:

- Age: more than 6 months.
- Medically fit and stable patient. (ASA I, II, III (well controlled)).
- Well motivated and Psychologically / mentally stable.
- Provision of Toilet, transport, telephone, and responsible relative at home.
- Body Mass Index (BMI): < 35.

#### 2. Patient Preparation:

- Examination and diagnosis.
- Routine investigations: Haemogram, Bl. sugar, Triple H, Urine, X-ray Chest, ECG, USG, Liver & Kidney function test if necessary. Any other test as per requirement.
- Medical Fitness (Physician/Cardiologist/Diabetologist/Anaesthesiologist).
- Overnight fasting.

- Bowel preparation, if necessary.
- Pre-op instruction on medication, e.g. stop Aspirin 3 days before surgery.
- Use of anxiolytic or sedative for a good night's sleep.
- Prophylactic antibiotic was given on admission.

#### 3. Anaesthesia used:

- Local anaesthesia: 2% Lignocaine HCL with or without adrenaline, mixed with equal quantity of 0.5% Bupivacaine, injected through a 27G needle. Sedation where required.
- Blocks: Pudendal, Ring, Field, Inguinal, Scrotal / Cord / Coastal and Spinal anaesthesia.
- Short General Anaesthesia: Inhalation or IV.
- General Anaesthesia.

#### 2. Discharge Protocol:

- Patient should be fully conscious.
- Hemodynamically stable.
- No giddiness on standing.
- Able to walk without vomiting.
- No or minimal pain.
- Passed urine.
- Responsible patient is present to take patient home.
- No surgical complications.

#### 3. On Discharge:

- Written instructions.
- Verbal instructions.
- Contact numbers of all our team, including the operating surgeons, in case of any questions and complications.
- Instructions on how to look for complications and its management: train the patient, relatives, staff and Family physician.

Certain definitive exclusions were followed, such as:

- Medically unfit for discharge on the same day.
- Mental retardation / psychologically unstable.
- Highly infectious disease.
- Upper respiratory tract infection.
- Premature or less than 6 month old babies.
- Requiring extensive post-op. monitoring.
- Long distance from home.
- Shock / trauma.
- High fever.

### **Procedure for anaesthesia:**

Different types of anaesthesia were used as per surgery and surgeons preferences. These were explained to the patient at the time of counseling.

Most common types with combinations at the Centre were:

- Loco-regional Blocks.
- Short GA.
- General Anaesthesia.

Most commonly used material for local anaesthesia in day to day surgery at our center was a combination of 2% lignocaine HCl (with or without Adrenaline) and 0.5% bupivacaine. Mixed in equal quantity, dose can be calculated based on the patient's weight. Recommended dose for 2% lignocaine without adrenaline is 4.5 mg/kg body weight, maximum 300 mg, with 1:80,000 adrenaline 7 mg/kg body weight, maximum upto 500 mg. 0.5% bupivacaine can be given upto 175 mg in an adult, as a single dose. (5)

Injection for the block is administered with a 27 G long needle. At the time of injection, patient is sedated, with Midazolam (1-2 mg) and Pentazocin (15-30 mg). This avoids the pain felt while injecting.

Small doses of Ketamine (10-25 mg) is sometimes used to achieve a complete sedation along with the regular sedatives. Intra-muscular Ketamine (2-6 mg/kg body weight), is ideal and very well tolerated by children, for induction.

Inhalation anaesthesia, either by endo-tracheal tube, Laryngeal Mask or 'I-Gel', were used in these patients, Halothene/ Isoflorine/Nitrous Oxide and Oxygen were used in different patients, as per choice of the anesthetist.

#### **Procedure for surgery:**

Details of surgical procedures will not be discussed. For the success of Day Surgery case, we should keep in mind that use of skin crease incisions, wherever possible, minimal dissection, subcuticular closure with fine, absorbable sutures and smaller incisions, add to faster recovery and healing with minimal pain.

#### **Post-Op.:**

Usually, intravenous fluid is restricted to one that is started in the OT. Unless required, patient is encouraged to start fluids orally, as soon as possible.

Mobilization is done as early as possible, first, on bed, then out off bed. Care should be taken to support the patient or wait till giddiness is completely gone. Oral intake is initiated within 2 to 3 hours. With water first and then followed by tea and biscuits. Unless it is necessary to be Nil-by-mouth for a longer time.

Average hospital stay for a Day Surgery case is 6 hours. Follow-up is after 48 hrs.

Discharge protocols was followed in every patient.

#### **Complications:**

One patient was readmitted for 'Spinal Headache' and treated conservatively by IV fluids and pain killers. Another patient of Umbilical hernia, with a BMI of 40, was readmitted for cellulitis in one leg, as a precaution, Intravenous antibiotics and limb elevation with gentle physiotherapy was initiated. Both patients were from the prospective short stay group.

#### **Result:**

2 out of 9572 patients operated at the Center were readmitted. Therefore, present overall re-admission rate is calculated as: 0.002 %.

In the Day Surgery cases, not readmission or complications were seen. Day Surgery cases are far more than the short stay cases.

#### **Discussion:**

Perspective selection of cases for surgery in a specific category and its retrospective analysis, has brought out, an equivocal results.

A true Day Case Surgery is a major surgery, where in, the patient is discharged on the same calendar day. However, these patient require a few hours of post-op observation and a back-up of a fully equipped operating theater with qualified staff.

A Day Surgery Centre (DSC), is a miniature hospital. It consists of Operation Theater, recovery area / rooms, staff duty rooms, reception, waiting rooms and doctors changing room / lounge. Additionally, pantry, store, linen and autoclaving room. They are all very compact. For example, there may be one OT, ten recovery bays or rooms doubling as private rooms, etc.

There are three major types of Day Surgery Centers, Incorporated: in the hospital building itself, like a separate ward with common dedicated OT. Or even separate OT and ward, but, same staff. These are self-contained units or wards in the hospital. Integrated: in the hospital complex, but, independent of the functioning of the hospital. They have separate staffing as well as accounting, but, situated in the hospital compound. Free Standing or Stand alone: centers can be

single or multi-specialty. As the name suggests, they are outside of a hospital complex, that is, independent units. Like any existing Nursing Homes or small hospitals, they are self-sustaining units with all basic amenities. (6, 7)

Among all these, the Stand Alone model is the most efficient and economical. Probably, it utilizes all positive aspects of Day Surgery and reduces overhead costs. (8)

One Day Surgery Center is a Stand-alone DSC, which is ISO 9001-2008 and FEQH of QCI Certified as 'Optimum'. SOP's used at the Center are Protocols incorporated from those recommended by The Indian Association and The International Association for Ambulatory Surgery.

Analysis of cases of the past seven years have been encouraging, it shows a raising trend in Day Surgery case, though slow. The number of case in the 'Major' category had markedly risen, indicating the increasing acceptance of Day Surgery.

A General Surgeon's regular OT list does not contain Hepatectomy, Colectomy, Parathyroidectomy and Pancreatectomy as part of the list of common surgical procedures. They are rare! Circumcision, incision and drainage of Paronychia and scar revision are very common, and in fact perhaps more numerous than those listed above. (9)

There are several classification of cases in a DSC, most commonly used are Major Ambulatory Surgery, Minor Ambulatory Surgery, Day Case, Day Care, 23 hrs stay, Short stay, etc. We have used Major Ambulatory surgery and Short stay for cases upto 48 hrs and beyond. OPD cases are not true Day Surgery and hence, should not be included. They are merely indicative of the percentage of cases performed at the Center. (10)

Medical Protocols are strictly followed and implemented. Patient Selection was broadly based on the fact that infants and children below 6 months would require monitoring and can go into dehydration very fast, therefore, not ideal for Day Surgery. American Society of Anesthesiologists (ASA) have classified patients on the basis of their physical condition, therefore, ASA I and II were usually chosen for Day Surgery. In some cases, a well-controlled ASA III class of patient can be taken for Day Surgery. (11)

Patient preparation would mean examination, investigation and surgery. This scheme of management, can be applied to

all category of patients. Investigations with relevance to the type of surgery. Medical fitness wherever required. Advice regarding overnight fasting and per-operative medication is self-evident.

Most important step while preparing the patient is the counselling for surgery, particularly, Day Surgery. Not only is it necessary for the patient to understand that they will be discharged on the same day, it would also mean to be able to accept conscious anesthesia. They have to be advised regarding the disadvantage as well as advantages of Day Care Surgery. It is best to be counselled by the operating surgeon, to have proper impact.

#### **Advantages of day surgery:**

- Reduces hospital stay, and thus, hospital acquired infection.
- Early ambulation and return to work.
- Reduction of overall cost.
- Reduces anxiety of surgery.
- Recovery in familiar surroundings.
- Risks and side effects of General Anesthesia and Spinal anesthesia is reduced.
- Less post-operative starving.
- Less inconvenience to relatives and family.
- Reduces wait list and congestion in a large hospital.

#### **Disadvantages:**

- Poor patient acceptance.
- Poor compliance to instructions / pre-op medication.
- Inadequate facilities at home.
- Lack of responsible person at home.
- Lack of facility near home in case of emergency.

Contraindication to surgery, as illustrated, they are self-explanatory, medically unfit patients would need to be monitored post operatively. Patients who have some form of mental retardation or psychologically unstable, would require hospitalization for better care. Long distance from any medical aid like hospital or primary care center, or even a medical professional, will make it difficult to decide if to send the patient home as Day Case. Over all, these contraindications will vary from case to case.

Discharge protocols help you make double sure that the patient has completely recovered from the surgery and anesthesia. That they have understood the implications of going home and fully understood how to look after themselves and communicate on their own or with the help of their rela



tives, with a medical practitioner, if necessary. We must make sure that all instructions are written down and explained to the patient and their relative present, make sure that it has been understood, any query to be answered. This requires training of the staff for this purpose.

In the hospital, we make sure that the patient is fully conscious, oriented, able to walk, take orally and having passed urine, in relevant cases. Further, does not have any complication, then they are fit to be discharged. Presence of a responsible person is a must to take the patient home. Driving by the patient on the day of discharge is not encouraged. A

home visit or a phone call will on the day of discharge as well as the next day, usually helps in reassuring the patient as well as over selves as to know that everything is normal.

### Conclusion:

In conclusion, considering the fact that Day Care Surgery is still not an established norm of treating surgical patients in India, as in the western world, the increase in numbers and its availability, is encouraging. By following the Protocols proposed for Day Surgery carefully and meticulously, we can ensure patient safety and overall success of the Day Surgery Center.

**Table 1: Day Surgery Cases.**

Hernia	454	Liposuction	81
Piles Excision	697	Hare Lip Correction	2
Vericocele	107	Skin Grafting	88
Fistulectomy	139	Nipple Correction	4
Fissurectomy	60	Breast Augumentation	37
Orchidopexy	14	TURP	1
Circumscision	133	Hypospadiasis Correction	2
Gynacomastia ex	21	Epididymal Cyst ex	19
Pilonidal Sinus Ex	94	SMR	31
Perianal / Rectal abscess	52	Tympanoplasty	5
Parotid cyst ex	2	Tonsillectomy	26
Cholecystectomy	4	I & D	367
Diabetic toe amputation	130	L. N. Biopsy	269
Lap Ovarian Cyst	76	Hydrocele	194
MTP	32	Testicular Bx	91
D & C	324	Breast Lump	195
Ant. Repair	128	Urethral Dilatation	6
Lap TL / Diag Lap	432	Cystoscopy	23
Eye Ptosis correction	2	Nasal Polyp	25
IOL	4	Cervical Cautery	76
Blephroplasty	1	Vasectomy	11
Burns Dressing	19	<b>Total</b>	<b>4478</b>

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# Novel method to repair abdominal wall hernia: DBSM (Double Breast Sandwich Meshplasty) - A day care procedure.

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## Introduction

The abdominal wall hernias are still commonly seen, as laparoscopic surgery has yet not completely taken over the open incisions. Some disease factors also compel the surgeon to do a laparotomy instead.

Ideal repair of abdominal hernia is tension free meshplasty. The consensus is now towards laparoscopic approach but the hurdle is cost and learning curve associated with technology.

Cost is mainly due to the non adhering meshes. Simple poly propylene mesh is now obsolete for intra peritoneal use.

The open traditional way poses the difficulty to cover the mesh from above. Sometimes it becomes difficult to mobilize the rectus, or go retro-rectus due to fibrosis. The gap is so wide that it cannot be approximated without tension.

Usually it is a common practice to spread and fix the mesh above external oblique aponeurosis.

With that, mesh remains exposed to infection, as fat cannot be closed water tight, more so when the fat layer is not much thick.

To overcome these problems DBSM is developed. It is DOUBLE BREAST SANDWICH MESHPLASTY. Mesh is covered on both the sides by making use of the redundant sac.

This also avoids extensive dissection and reduces morbidity.

DBSM can be combined with the principal of going beyond 5 cms around the edges.

That is easily possible by:

01. Cover the gap with one sided wall of sac
02. Take mesh with size more than 5 cms all around the gap.
03. Place the mesh above gap and stitch it with the edges of gap.
04. Cut 8 flanges all around in the redundant frill
05. Give small cuts in the external oblique aponeurosis, about 4.5 cms away from the edge.
06. Pull these flanges by inserting a long artery forceps through those cuts.
07. On the flap side, it will be across the sac which is going to cover the mesh from above.
08. Fix the flanges and close all cuts in aponeurosis.
09. This will simulate overlapping of 5 cms around the repair.
10. Cover the mesh with other wall of the sac.

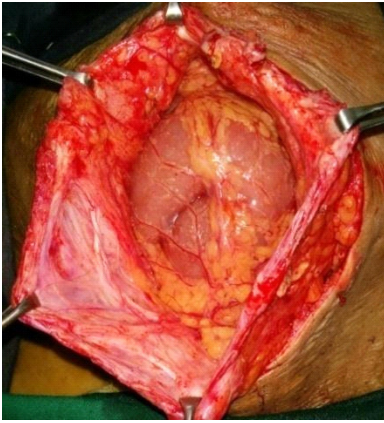





When the gap is quite wide, hernia edges cannot be approximated without tension.

Problem also goes with thin abdominal wall. Most of the surgeons get away by placing the mesh directly on the aponeurosis. This becomes open to exterior, because fat and skin closure alone, cannot protect the mesh from foreign body reaction and infection. DBSM gives a great satisfaction of mesh cover. The dissection is also minimal as compared to the mobilization of rectus to cover the mesh.

## Conclusion

1. It is simple, involves minimal dissection hence becomes a day care procedure because of low morbidity.
2. Cost effective as compared to lap repair.
3. Mesh is covered from below and above, making use of the hernial sac.

## Method

<p><b>The sac is opened.</b></p> <p><b>Sac preserved.</b> <b>It is split open in the form of two flaps</b></p> <p><b>Right side of the flap is sutured to opposite edge.</b></p> <p><b>This covers the peritoneal cavity.</b></p>		
<p><b>Mesh placed and sutured to edges of the gap, which is covered by one flap of the sac.</b></p> <p><b>The other flap covers mesh and is sutured to the opposite edge.</b></p> <p><b>The mesh is sandwiched between two layers of sac.</b></p>		
<p><b>Fat is closed.</b> <b>Suction drain placed.</b> <b>Redundant skin excised and sutured.</b></p>		

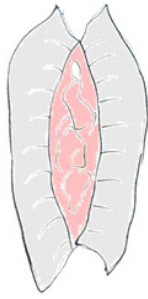


Figure 1  
 Sac opened. Split into two halves.  
 Inner surface is smooth, glistening and grayish white.



Figure 2  
 Right side flap covers the peritoneum by stitching it to the left edge of gap. The outer surface of flap is seen as irregular and yellow, laden with fat.



Figure 3  
 Mesh placed over the gap and centre of the mesh sutured all around the edge. The portion of mesh marked blue will be excised.

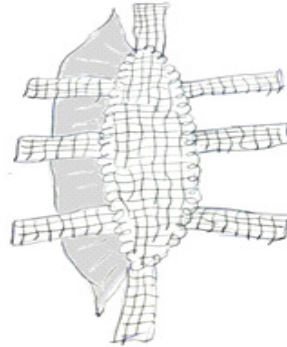


Figure 4  
 Flanges seen. On the right side over the aponeurosis and on the left over the left flap of the sac.

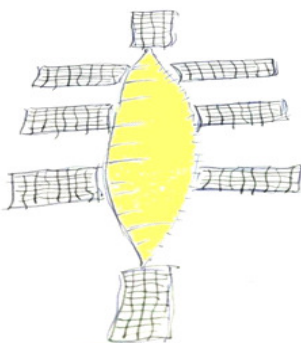


Figure 5  
 On the left side, flanges taken out across through the flap of sac which covers the mesh. Flap covers the mesh and is sutured to the left edge of the gap.

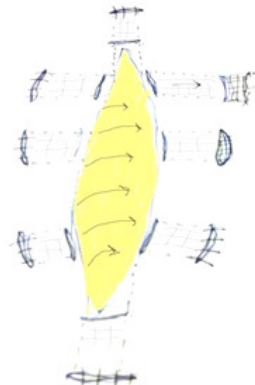


Figure 6  
 A. Flange pulled out.  
 B. Flange buried.  
 C. Cut sutured along with flange giving support at 8 places all around.

# Comparitive study of Lateral Internal Sphincterotomy (Closed Vs Open) in Anal Fissure.

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## Abstract

Anal Fissure is one of most common proctological disorder which can cause symptoms at any age. Acute anal fissure may resolve spontaneously. Those who doesn't resolve progress to chronic anal fissure. Traditionally it has been treated surgically. Various methods have been evaluated. Now lateral internal sphincterotomy is considered to be safe, effective and Gold standard in the treatment of anal fissure. 110 patients were subjected to lateral internal sphincterotomy, out of which 68 patients had undergone closed lateral internal sphincterotomy and 52 patients had undergone open lateral internal sphincterotomy. The effectiveness and complications were evaluated. Complications in both the groups were comparable from 9-10%. Healing rate is 97% in open method & 98% in closed method. Average hospital stay is both groups is one day only. Follow – up done on 10<sup>th</sup> & 30<sup>th</sup> post operative days. Pain relief is 98% at 4 weeks.

## Introduction

Anal fissure is a longitudinal tear in the anoderm. This is common disorder which can cause symptoms at any age, most common in younger adulthood. This disease is commonly presented with painful defecation & bleeding P/ R and sentinel pile. The most common site for anal fissure is 89% posteriorely and 7% anteriorely. 70% of the anal fissures heal spontaneously. Treatment parts divides into two parts i.e. medical (conservative) & surgical. Lateral internal sphincterotomy is considered to be the gold standard in anal fissure.

## Aim & Objective

The study was carried out at Sarvoday Hospital Jabalpur (M.P.) with the following aims & objectives.

1. To analyze difference between open techniques that gives you direct approach to internal sphincter as compared to blind approach to internal sphincter in closed method.
2. To determine the out come of surgical procedure and their complication.
3. To review the literature available on lateral internal sphincterotomy and compare it with our finding.

## Material & Method

110 patients of anal fissure were operated over a period of March 2013 to March 2015. Routine investigations & pre-anesthetic check-up were done is all patient. Patients having altered bowel habit undergone sigmoidoscopy, colonoscopy. All the operation were done in lithotomy position under

spinal and local anesthesia. Open lateral internal sphincterotomy done in 52 patient and closed lateral internal sphincterotomy done in 68 patients. In our study we prefer a radial incision rather than circumferential incision at the anal margin to approach the internal sphincter in open lateral internal sphincterotomy.

## Observation

Individual procedures have their own merit & demerits. The following table shows comparative results.

	Open LIS	Closed LIS
Incision	Taken	No
Tamponade	Not required	Required
Post –op Pain	Considerable	Less
Hospital Stay	Avg. 1 day	Avg. 1day
Heahing rate	97%	98%
Pain relief	98%	98%

Result of therapy (Lateral internal sphincterotomy open versus closed.)

Features	Open 52 (No. of Patients )	Closed 68 (No. of Patients )
Bleeding	0	3
Urinary retention	1	1
Prolapsed haemorrhoides	2	0
Abscess	2	2
Fistula in ano	0	2
Incontinence	0	0
Recurrence	0	1



In our study complications rate of open versus closed lateral internal sphincterotomy show equivocal result 9.6% and 13% respectively.

Complications	Open Lateral Internal Sphincterotomy				Closed lateral internal sphincterotomy	
	Our Study	Lock/ Thom	Bailey et al	Lewis	Our study	Hoffman & Golighar
Bleeding	0	1	1	1	5	22
Urinary retention	1.9	1	0.2	0	2	0
Prolapsed Piles	3.8	0	0	0	0	2
Abscess	3.8	0	0	2	4	1
Fistula in ANO	0	0	1	0	4	1
Incontinence	0	0	2	6	0	12
Recurrence	0	0	8	8	1	3

Temporary incontinence to flatus was noticed in 5% patients in close lateral internal sphincterotomy. The result of our study and various other authors study shows comparable results.

### Conclusion

Lateral internal sphincterotomy is a very safe, effective and less expensive method for treatment anal fissure with minimal complications rate. In closed lateral internal sphincterotomy procedure, cutting of internal sphincter is blind, where we are not sure about the complete transaction of fibers. In open lateral internal sphincterotomy you can locate, isolate & cut the fibers of internal sphincter under direct vision. Our results suggest that both the technique (closed and opened lateral internal sphincterotomy) is very safe & effective. My personal preference is for open lateral internal sphincterotomy because of above mentioned reason, as one day surgery.

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