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April'19 - June'19
Vol. 9

# Osteoporotic Vertebral Compression Fractures and Cement Augmentation Vertebroplasty & Kyphoplasty

Is Metastatic Breast Cancer Curable?

Heel Reconstruction By Gracilis Free Flap

ABO Incompatible Third Kidney Transplant with Nephrectomy of Previous Allograft with Double Ureteric Reimplantation


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April - June 2019


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# Is Metastatic Breast Cancer Curable?

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## INTRODUCTION

Metastatic breast cancer is no longer considered incurable. It is now classified as oligometastatic and polymetastatic disease. There have been major advances with improved survival even in oligometastatic disease. 'Oligos' is Greek word for 'few', and the term oligometastasis typically refers to less than five metastases, usually limited to a single organ. Most of these patients have better outcomes with a radical curative intent to treat both the sites of disease. At least 1-10% cases of newly diagnosed metastatic breast cancers are present with oligometastatic disease and a higher number in recurrent setting. As imaging modalities have become more advanced, such as high-resolution computed tomography with positron emission tomography and magnetic resonance imaging, we have far greater ability to detect these metastases.

## CASE SUMMARY

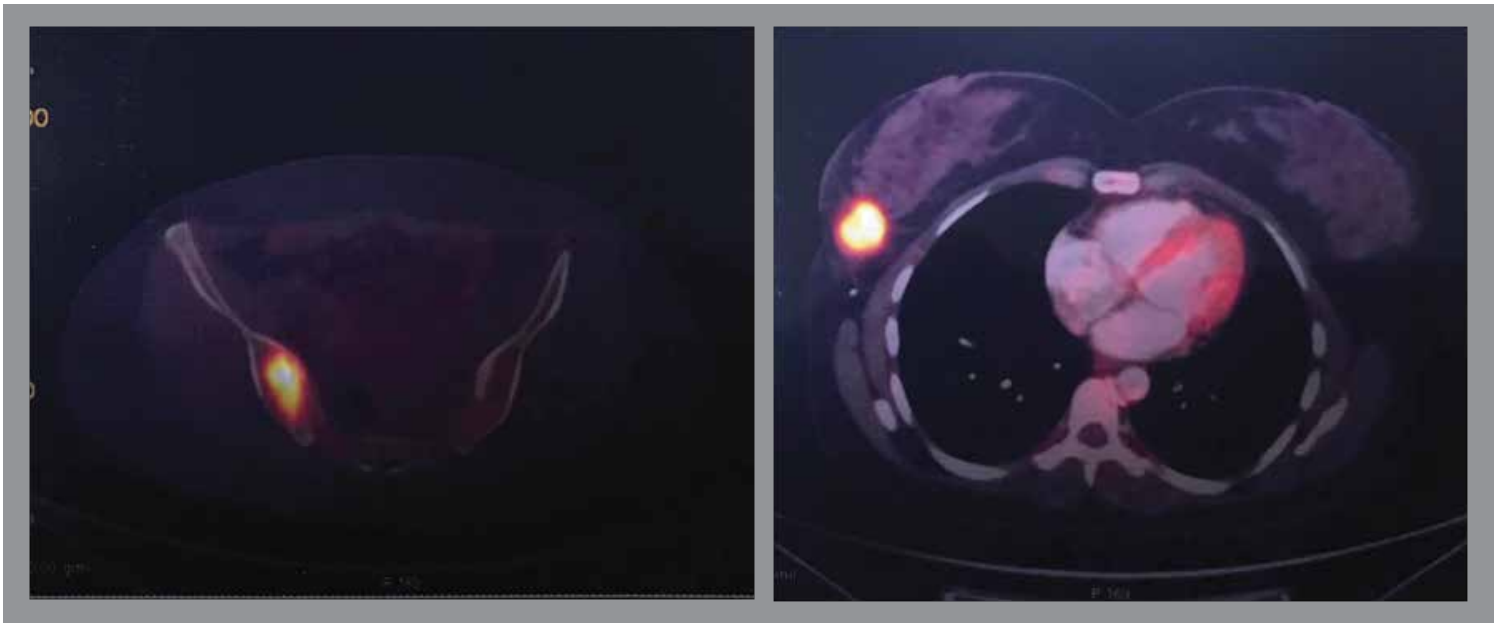
A 37 year old premenopausal lady presented with a lump in right breast lower central quadrant with no significant ipsilateral axillary lymph nodes (Early Breast Cancer). Initial staging workup did not show any other site of metastases. The patient and family were counselled regarding her treatment plan. She underwent right breast conserving surgery, axillary clearance and oncoplastic reconstruction in October 2017. As per final histopathology report she was advised to undergo adjuvant chemotherapy and radiotherapy. She completed her chemotherapy; however due to family circumstances defaulted on her radiotherapy schedule.

She now presented to us with a recurrent swelling in a different quadrant of the same breast; biopsy from the lump confirmed cancer. PET CT scan was done for staging which unfortunately picked up a single site of metastases in her pelvic bone.

In view of oligometastatic disease (single sight of bone metastases) the case was discussed in multispecialty tumor board in the presence of oncopathologist, radiologist, nuclear medicine specialist, surgical, medical and radiation oncologist. Patient and her husband were counselled regarding the extent of disease and possibility of cure with aggressive local treatment at both sites. Subsequently she underwent wide excision of the recurrent breast lump with oncoplastic reconstruction followed by stereotactic radiotherapy to the lesion in pelvic bone with curative intent. The patient is now receiving chemotherapy in order to prevent any further recurrence. She is further planned for radiation to her right breast upon completion of chemotherapy.

## DISCUSSION

The treatment of breast cancer requires a multimodality approach with strict adherence to the protocol of surgery, chemotherapy and radiotherapy in the correct sequence according to the stage of disease. Oligometastatic breast cancer may be cured with aggressive local treatment followed by systemic therapy (chemotherapy + targeted therapy + hormone therapy). However the treatment approach must be individualized and performed by a multidisciplinary team after tumor board discussion and proper patient counselling. Better outcomes are expected in future due to availability of advanced local treatment options, oncoplastic breast conserving surgery, stereotactic radiotherapy and a better understanding of tumor biology at molecular level and availability of personalised targeted medicines.



# ABO Incompatible Third Kidney Transplant with Nephrectomy of Previous Allograft with Double Ureteric Reimplantation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A 52 year old patient had a history of previous two kidney transplants done outside. He was dialysis dependent for the last 6 months because of chronic graft dysfunction. Graft doppler showed small contracted renal allograft in right iliac fossa with increased parenchymal echogenicity and normal size graft in the left iliac fossa . USG Doppler for pelvic vessels showed atherosclerotic changes in the form of wall thickening, luminal irregularity and calcification of aorta and bilateral iliac arteries.

In previous two transplants, donors were a mother and a father in 2006 and 2011 respectively. For the third kidney transplant his wife was the only available donor but the blood group was A+ve where as patient's blood group was B+ve. The anti A antibody titre was 1:8. So, patient was thoroughly counselled about possible option of third kidney transplantation with ABO incompatible donor, his wife.

Patient underwent CT angiography whole abdomen to look for the status of common iliac, external iliac, internal iliac, native renal and splenic artery. As the right allograft was small and contracted and was anastomosed with internal iliac artery, a surgical plan was made. Right graft nephrectomy followed by kidney transplantation was done in the right iliac fossa. The donor was evaluated with basic tests, DTPA Renal scan and CT Renal angiography, which suggested double renal artery on left side, single renal artery on right side with bilateral single renal veins with right side duplicated pelvicalyceal system and ureter. The patient required two plasma exchanges before the kidney transplant When anti A titre was achieved 1:4, the patient was taken for transplantation.

Right modified Gibson's incision was made. Peri graft dense adhesions were present. Meticulous dissection was carried out outside renal capsule. Internal iliac artery was identified and ligated, the renal vein ligated and the graft was taken out. The new allograft renal artery was anastomosed with an external iliac artery end to side and renal vein anasatomosed with an external iliac vein. There were two ureter in the kidney so both the uretes were reimplanted separately using Lich Gregoir techniques over two 6F/16cm DJ stent. Intraoperative period was uneventful.

Post operatively the anti A titre remained 1:2. There was no need of plasma exchange. The graft Doppler of both renal artery and vein were normal. The Serum creatinine was 1.1mg on third post operative day. Drain and Foley catheter were removed on fifth post operative day. Patient was discharged on seventh postoperative day with normal graft.

# Osteoporotic Vertebral Compression Fractures and Cement Augmentation – Vertebroplasty & Kyphoplasty

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Dr. Pramod Saini

Osteoporosis as a problem is commonly seen in Post menopausal Women. Bones, especially cancellous bones become very brittle and are prone to fractures.

Spinal fracture also called vertebral compression fracture, occurs most often in the thoracic or middle spine. Most common cause is trivial fall at home and in some cases sudden jerk or violent coughing and sneezing. Compression fractures cause mild to severe pain depending on severity of fracture, which increases with activity and gets better with rest. In majority of cases there is no neurological deficit but some cases develop weakness in legs when fracture fragment starts compressing the spinal cord.

Diagnosis is usually made on clinical examination and Xrays. MRI is not indicated in all cases but should be done to rule out pathological fractures due to metastasis or infection, especially in patients with long standing pain, constitutional symptoms and advanced age.

Treatment for osteoporotic fractures is initially conservative. It includes pain medication, rest and bracing. Medication simply relieves the pain but bracing will restrict movement, relieve pressure and allow the fracture to heal. Majority of fractures heal with some kyphosis with non-operative managent. Patients are mobilised out of bed with brace as soon as pain permits. Most of the fractures unite within 2-3 months but some fractures go into non union and these patients have persistent back pain restricting activities. These patients then require cement augmentation procedures like vertebroplasty or balloon kyphoplasty.

## Kyphoplasty

Kyphoplasty uses a two-step process of inserting a special balloon device into the compacted vertebrae to attempt to restore the vertebrae to a more normal shape. Subsequently, a cement-like material (polymethylmethacrylate) is injected into the space created by the balloon to retain the correction. By restoring the vertebrae to a more normal state, alignment of the spine is improved. Kyphoplasty is performed through a small incision in the back. It is done in a hospital setting under either a local or general anesthetic, depending upon the severity of the case and fitness of the patient. The cement mixture hardens in about half an hour. Pain killers are often given to the patient for the first couple of days to help ease the pain The entire procedure takes about an hour and patients may return home the day of surgery, or perhaps stay in the hospital overnight. Pain relief may be seen within two days of surgery.

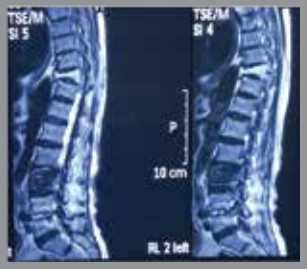
Kyphoplasty may be preferred to open surgery for osteoporosis patients because of the already brittle bone. However, this procedure will not correct the bone lost due to osteoporosis; it may only stabilize new fractures. The procedure may restore lost height and decrease “widow’s hump.” Patients who have one vertebral fracture are five times more likely to get another adjacent to the damaged one; therefore steps should be taken to limit the effects of osteoporosis. Although complications appear to be less than 1%, Kyphoplasty can cause infection, bleeding or embolism if the cement mixture gets into the blood stream and passes through the heart and lungs.

## Case

Osteoporotic vertebral compression fractures and cement augmentation or kyphoplasty.

78 yr old male had fallen in the bathroom resulting in L3 lumbar vertebra fracture. Patient was diabetic and hypertensive. Fracture was intially managed non-operatively with rest, belt and medicines. However the back pain persisted and he was bedridden. His MRI showed non union of L3 fracture. Due to severity of pain and ununited fracture, a decision to do cement augumentation by kyphoplasty was taken.

The surgery was performed as a day care procedure under local anaesthesia. Patient was made to sit in the evening and then he was discharged. He reported significant improvements in pain and activities.



MRI showing Nonunion of L3 vertebra


2. Insertion of ballon in the vertebra


3. Inflation of Ballon


4. Injection of Cement


5. Post op Xray

SPINE CARE

# Heel Reconstruction By Gracilis Free Flap

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Dr. Ashish Rai


Dr. Saurabh K Gupta

## Introduction:

Heel is the important and integrated part of the sole of the foot which is essential for smooth walking. Without the heel the propelling function of the foot during walking is severly interrupted. Trauma is the leading cause of soft tissue loss of the heel followed by tumor, infective gangrene and burns. Trauma may involve only the soft tissue, but majority of the time may be associated with fracture of one or more bones which is complicated by exposed tendo achilles adjacent to heel.

## Case Report

We saw a 23 yrs old boy who met with an accident while riding a motorcycle as his heel got stuck in the back wheel of the motorcycle. He was taken to a government hospital where he was managed with conservative dressings and later on, skin grafting. The boy had severe pain on walking and could not do weight bearing on the affected part. On Examination of the affected part a very badly scarred area was seen; the heel covered only with skin graft.

## Planning

Proper discussion with the patient was done regarding the various options of reconstruction of the heel and he consented for the gracilis free flap reconstruction in view of hidden scar and excellent contouring possible with free gracilis flap. Surgery was planned and anesthetic fitness sought. Patient was taken up for surgery and Rt. Gracilis muscle harvested and transferred to the defect and anastomosis was done with posterior tibial vessels of the limb.

## Results

Patient tolerated the procedure well and was managed in ward post surgery. Monitoring of flap was done on two hourly basis for first post-op day and four hourly on second day. Patient was discharged on the fourth day.


Images Depicting harvest of the free gracilis muscle and microvascular anastomosis with leg vessels

## Conclusion

Though various options are available for reconstruction of the heel defect , the best results are seen with distant tissue transfers or free flaps. With their use patients my have a stable base, pliable tissue which provides proper padding. In cases of young patients, free tissue transfers are the first choice in armamentarium. In elderly age groups or patients with comorbities reconstruction with the Local flaps should be considered as they require less operative time and less invasive and rigorous monitoring.

# Sutureless Small Incision Squint Surgery

## Case Report

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Dr. Satya Karna


Dr. Madhu Karna

A 48 year old Russian lady accompanied by her interpreter was referred for outward deviation of her right eye and failing near vision since a couple of years. She felt embarrassed and disfigured as she could not look at anybody with both her eyes simultaneously and it seemed to her that she had lost control over her right eye.

On examination she was found to have refractive error (Hyperopia and Presbyopia) and right exotropia of about 45 prism dioptres (PD) for near and 35 PD for distance, and was more in downgaze (50 PD) compared to upgaze (30 PD) (A Pattern) (Fig. 1).The squint was remeasured over distance and near glasses and found to be same for distance and near 35 PD (A Pattern Decompensated Intermittent Divergent Squint) for which she was advised squint surgery.

The patient wanted an aesthetic, minimally invasive procedure from which she would recover in a week's time so that she could return to her country.

She was given presbyopic glasses, and a sutureless small incision squint surgery was done, whereby in both eyes lateral rectus was Recessed 8mm and transposed downwards 5mm through a Fornix based small conjunctival incision.

Postoperatively her Presbyopic correction restored her vision and convergence to 6/6, N-6 and the surgery straightened the eyes to regain alignment for both distance and near (Fig. 2), also in up and downgaze, with cover test showing orthotropia in nine positions of gaze at day 5 with no redness, scar, swelling or narrowing of the palpebral aperture.

The patient came with her entire family, all highly appreciative of the aesthetic procedure and were relieved to be going back in time looking straight and scar free.

### DISCUSSION

The conjunctival incision at the commencement of strabismus surgery has a crucial role in facilitating the subsequent steps of exposure, muscle manipulation, and closure. There are 3 basic approaches to strabismus surgery:

1. Limbal incision (Fig 3)
2. Paralimbal incision (Fig 4)
3. Fornix (or cul-de-sac) incision (Fig. 5)

The limbal incision though being easy and permitting direct access to the sub-tenon space is fraught with many disadvantages which include

1. Increased risk for irritation from conjunctival sutures placed for closure as compared with the fornix incision
2. Higher risk of noticeable conjunctival scarring, that is, cicatricial changes within the palpebral fissure
3. Potential complications from corneal dellen formation
4. Possible loss of stem cells at the limbus
5. Interference with possible future trabeculectomy (from conjunctival scarring) when the peritomy is placed superiorly.

The Paralimbal incision, though gives direct access to and good exposure of the muscle insertion, but carries the risk of inadvertent injury to the muscle belly and the ciliary vessels at the muscle insertion, with hematoma formation and brisk bleeding, respectively.

The Fornix incision though, requires a certain amount of elasticity in the conjunctiva but otherwise is one of the most versatile incisions for strabismus surgery with the advantages of:

1. Unlikely to cause noticeable scarring because the incision is "tucked" in the fornix.
2. A single incision potentially allows access to more than 1 muscle. For example, an inferotemporal incision allows access to the lateral and inferior recti.
3. Reoperations may be performed again through the original fornix incision scar.
4. Minimal discomfort from sutures placed at the site of conjunctival closure.
5. The fornix incision is also popular in adjustable strabismus surgery because it provides coverage of the muscle without the need for conjunctival closure, permitting delayed suture adjustment.

Surgeons have always been in pursuit of a Keyhole approach to the surgical site making it aesthetic with minimum scarring. Fornix based conjunctival incision makes strabismus surgery small incision akin to endoscopic surgeries giving way to smoother and faster recovery and a happy patient.

Fig. 1. Preoperative Nine Gaze

Fig. 2. Postoperative Primary Gaze

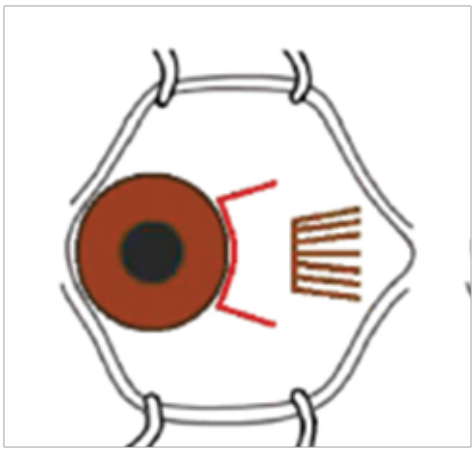

Fig. 3. Limbal incision

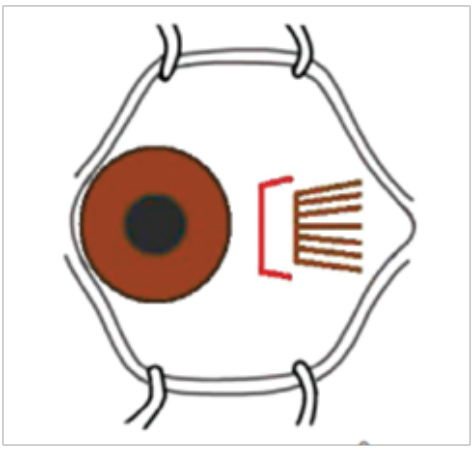

Fig. 4. Paralimbal incision

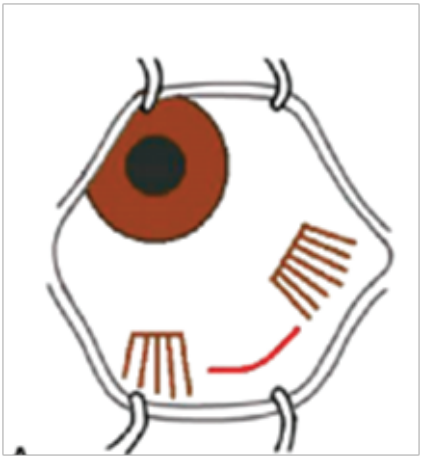

Fig. 5. Fornix (or cul-de-sac) incision

# Our Endeavour Towards Quality (April to June 2019)

Jaypee Hospital promotes an environment of Continual Quality Improvement aimed towards increasing the likelihood of desired health outcome and improving the patient safety. The quality programme is an integral part of hospital's strategic and operational plan. Management at Jaypee Hospital takes consistent efforts to make Quality a culture of the organization.

Hospital strives to maintain high quality which is evident from our patient satisfaction indices. Despite constant increase in Inpatient and Outpatient footfall over the years; we have been able to maintain more than 85% patient satisfaction rate. The satisfaction index for the quarter (Apr-Jun 2019) is 83% for IPD, 95% for OPD and 81% for EHC. Patient feedback is fully acknowledged by management; complete discussion is done on weekly basis in the presence of all respective department coordinators and necessary action is taken (wherever required). Everyday patient care related concerns are raised on daily basis in the Operations meeting for quick redressal.

In accord with the mission of the hospital; our efficient team in diagnostic services is committed towards providing high standard of patient care. In the continuous strive to deliver quality reports; the reporting errors for the quarter (Apr-Jun 2019) have been 0.11 per 1000 investigations for Laboratory Medicine and 0.03 per 1000 investigations for Radiology Department.

Emergency department at Jaypee Hospital has got an efficient team which relentlessly works towards providing the services on time, which is quite evident from the prompt response of the Emergency Staff as soon as the patient arrives in the Emergency. The responsiveness of the Emergency staff is monitored in the form of an Indicator Data "Initial Assessment Time". The Average Initial Assessment Time in Emergency has been 00:04:47 (Four Minutes and Forty Seconds) for the period of Apr-Jun 2019 which is considerably lower than the Bench Mark of 10 Min.

We at the Jaypee Hospital always value time and makes sure that patients who have come to OPD for visiting a consultant waits for minimum possible time, our average OPD waiting time for the month of April-June 2019 has been less than 20 Minutes, thereby making our patients happy by providing them timely services.

Our expert and qualified surgeons are extremely committed towards their job and perform their surgeries with great expertise, wisdom and diligence. The success rate of surgeries is always encouraging and outcome of almost all surgeries has always been positive. There are only mere cases where patients were re-explored due to some unanticipated and unavoidable complications which have arisen due to surgery. There were only Six (6) cases which were Re-explored out of total 1936 surgeries performed, making an average Re-exploration rate of 0.22% for the month of April-June 2019.

Since Hospitals apart from curing, treating and promoting patients overall well being and health may also unintentionally contribute in infecting the patient during patient's visit or stay at a hospital, if stringent Infection Control measures are not exercised. The Infection control Head along with her Team

which is qualified, trained and have years of experience in Infection control practices has always ensured that patient are safe from infection. The efficient, effective and flawless working of sterilization department (CSSD), House Keeping Department and other concerned is a result of expert leadership and guidance of Infection control officer.

The Infection Control Department has succeeded in improving the infection control practices and bringing down the Infection rates from time to time as part of Continual Quality Improvement (CQI) Programme. The infection rates of various identified Device associated infection from a period of April-June 2019 have been 3.2/1000 Urinary Catheter Days, 1.32/1000 Central line Days, and 0.97/1000 Ventilator Days for Catheter Associated Urinary Tract Infection (CAUTI), Central Line Associated Blood Stream Infection (CLABSI) and Ventilator associated Pneumonia (VAP) respectively. The other infection rate i.e. Surgical Site Infection (SSI) has been 0.74% on an average during the same period of time. These rates clearly indicate that Device associated infection (DAI) rate at Jaypee Hospital is considerably low, making it one of the safest hospital.

Jaypee Hospital has got a world Class Transfusion Medicine Department (Blood Bank) which is equipped with world class infrastructure, equipments and has got state of the art technology. The blood taken from Blood Donors (Both Replacement and Volunteer Donors) undergoes several tests and analysis before being transfused to a patient. The Blood is tested for various Viral Markers, like HIV, HbsAg and HCV; for presence of various other infections like Malaria and Syphilis; and also compatibility testing of blood is done to ensure the patient safety and to avoid reactions related to transfusion. Jaypee Hospital is one of the few hospitals in Delhi NCR region whose blood bank has got Nucleic Acid Testing (NAT) Lab which is sensitive enough to detect the different pathogens in the donated blood even when they are in their window period thereby ensuring the maximum safety of Blood and Blood products. The average transfusion reaction rate for the Apr-Jun 2019 Quarter has been 0.09% (3 Reactions out of total 3349 transfusions) which is considerably lower than the set benchmark of 3%.

# AWARDS & ACCOLADES

**THE BEST MULTI SPECIALTY HOSPITAL IN DELHI-NCR**
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Ranked amongst the
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in North India by Times Health
All India Critical Care Hospital
Ranking Survey 2017

**EMERGING BRAND OF THE YEAR 2016**
by India Health & Wellness Awards 2016

**BEST EMERGING HOSPITAL**
by TOI Best Hospital Survery, 2016

Ranked amongst the
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Ranking Survey 2019

**EMERGING BRAND OF THE YEAR 2018**
by India Health & Wellness Awards 2018

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