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# HOLY FAMILY HOSPITAL

## *Newsletter*



*Dedicated to the Greater Glory of God and to the  
cause of suffering humanity*

# Editorial

Warm Greetings from the editorial board on the occasion of the second issue of hospital newsletter on **mother and child health**. In this editorial, I would take the opportunity to highlight the importance of universal newborn screening, which is already a standard of care in many developed countries and is being followed at Holy Family Hospital, I would like to begin with words of wisdom from **Helen Keller - "Blindness separates people from things, Deafness separates people from people"**



As per WHO, hearing loss is one of the most common congenital anomalies, occurring in approximately 2-4 infants per 1000. Permanent hearing loss can occur at any age but about 25% of the current burden is of childhood onset. Annually 798 000 babies worldwide, suffer permanent hearing loss at birth or within the neonatal period and at least 90% of them are from developing countries. World Health Assembly passed a resolution in 1995 urging Member States to "prepare national plans for the prevention and control of major causes of avoidable hearing loss, and for early detection in babies, toddlers and children within the framework of primary health care".

## Why is Early Identification of Hearing Loss so Important?

Early identification and intervention can prevent severe psychosocial, educational, and linguistic repercussions. Infants who are not identified before 6 months of age have delays in speech and language development. Intervention at or before 6 months of age allows a child with impaired hearing to develop normal speech and language, alongside his or her hearing peers.

## How to identify early hearing loss?

### 1. High Risk Screening –

- TORCH infections
- Babies exposed to drugs known to affect hearing
- Family history of hearing loss
- Low birth weight and/or prematurity
- Low Apgar scores- oxygen deprivation or breathing difficulties at birth
- High bilirubin levels
- Syndromes associated with hearing loss, abnormal head or facial structures

High risk screening was not enough as 50% of infants born with hearing loss have no known risk factors.

### 2. Universal Newborn Hearing Screening –

All infants should have hearing screening using a physiologic measure

- At birth but not later than 1 month of age
- All infants not passing initial screening and subsequent rescreening, not later than 3 months of age
- Must have confirmatory audiological and medical evaluations not later than 6 months of age
- All infants with confirmed permanent hearing loss should receive early intervention as soon as possible

## How neonatal hearing screening is done?

OTOACOUSTIC EMISSIONS are low intensity sounds produced by the cochlea due to outer hair cell movement or motility and are Spontaneous or Evoked.

Evoked TEOAE/DPOAE is used as Hearing Screening Tool for newborns. It is an objective and simple test using a portable equipment requiring very little interpretation. It can be done in sleeping babies and provides ear specific information. This test confirms/rules out the presence of Cochlear dysfunction.

### Limitations of OAE:

- May exhibit normal OAE with significant hearing loss.
- Not a test of hearing status.
- Does not evaluate auditory neural pathways.
- Does not document hearing loss.

The preferred model for screening should begin with an evoked otoacoustic emissions test and should be followed by an auditory brainstem response test for all infants who fail the evoked otoacoustic emissions test.

**Early Hearing Detection and Intervention Programs are becoming the standard of care in an increasing number of countries.**

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The Department of Pediatrics at Holy Family Hospital provides comprehensible care to newborns and children. The fully equipped nursery caters to close to 2000 deliveries per year. The newborns are monitored by specially trained nurses and state of the art monitoring devices. The NICU is equipped with latest phototherapy machines, ventilators and other respiratory support systems. The rate of sepsis is extremely low in the unit which is the reason for the outstanding outcome of the NICU graduates with a birth weight as low as 550 grams. The NICU is supported round the clock by trained doctors ensuring standard care and resuscitation as per international guidelines. A trained lactation counselor helps the mothers who are having difficulty in initiation of breastfeeding.

We also have a special outborn nursery which caters to newborns born outside the hospital. We get admissions not only from Delhi but also from neighboring areas including Haryana, Rajasthan, and Uttar Pradesh. Quality care at a reasonable cost is probably a reason of this.

The Pediatrics Department has an intensive care unit for older infants and children as well. The unit is fully equipped with latest respiratory support systems (mechanical ventilators, CPAP, heated humidified high flow nasal cannula, and non-invasive ventilation) and advanced

monitoring for the critically ill children. We have support from in house pediatric surgeons, nephrologists, cardiologists, and gastroenterologists, which help us in managing these sick children. The non-seriously ill children are managed in the 50 bedded children ward.

We also run a busy outpatient department consisting of both private and general OPD. The specialty clinics include Pediatric Pulmonology, Pediatric Cardiology, Pediatric Nephrology, and Pediatric Neurology, each of which is run by a specialist in the subspecialty along with residents. Vaccination and developmental assessment is done in the Well baby clinic. We also offer psychological services to children with behavioural and other psychological problems.

There is no department without academics and research. Our department is actively involved in teaching of DNB residents through a structured teaching program. The department admits two primary and two secondary DNB residents each year. Residents trained from our hospital are serving the nation and abroad in various capacities. Research from the hospital has found its place in reputed scientific journals.

The inspiring leadership provided by the department's Head, Dr Sumbul Warsi, is instrumental in guiding the department. The department strives for high ethical standards, excellence in education, accountability, and team spirit, which are its core values.

## VITAMIN D - MORE IS NOT MERRIER

Dr. Yogesh Parashar and Dr. Sunny Agrawal

Vitamin D is now known to be a part of many extraskeletal pathways, apart from bone mineralization. Recent studies have also reported high prevalence of vitamin D deficiency in individuals across all age groups. With a new found interest in vitamin D regarding its role in many conditions and its rampant deficiency in Indians, the prescriptions have increased manifold. Lot of preparations of vitamin D with various strengths are available over the counter. Inadvertent overdose can lead to toxic vitamin D levels with serious complications. Recently, a child died of inadvertent vitamin D overdose at the All India Institute of Medical Sciences. We present a case of vitamin D toxicity presenting with hypercalcemia and renal failure.

### Case

A 10 year old girl visited an orthopaedic surgeon for repeated twisting of her ankles. Her examination and X-rays were normal, vitamin D levels were 33 ng/mL (normal 25(OH)D 30-100 ng/mL) and calcium was 9.5 mg/dL. She was given two injections of Cholecalciferol (vitamin D3) 600,000 units intramuscular at one week interval. She was advised to continue oral Cholecalciferol 60,000 units weekly, and asked to take a tablet of Gemcal containing Calcitriol 0.25 mcg, and Calcium carbonate 500 mg daily.

A few weeks later she had loss of appetite and felt tired. There were episodes of headache, abdominal pain and vomiting. She had pain in right ear radiating to the jaw. There was one episode of fainting needing IV fluids. Repeated examinations were normal, initial abdominal ultrasound was normal, but serum creatinine was 1.5mg/dl. She was seen by us two months after the initial Cholecalciferol dose. On examination she was normal. Blood pressure was 110/80mmHg, there were no bony abnormalities, abdomen was normal, ENT and dental examinations were normal.

**Investigations** – Investigations were suggestive of hypercalcemia, with markedly elevated vitamin D levels and suppressed PTH levels. Renal parameters were deranged. Blood gases were within normal range. Ultrasound showed mildly increased renal cortical echogenicity but no nephrocalcinosis. ECG was normal. Her ASO, ANA, CBC, LFT, amylase and lipase were normal.

Investigation	Value	Investigation	Value
➤ Serum electrolytes		➤ Serum Alkaline Phosphatase	120 IU/L
➤ S. Calcium	14 mg/dL	➤ Vitamin D levels	
➤ S. Potassium	143 mEq/L	➤ 25-(OH) vitamin D	144.7 ng/mL
➤ S. Sodium	4 mEq/L	➤ 1,25-(OH) <sub>2</sub> vitamin D	116.52 pg/mL
➤ S. Chloride	110 mEq/L		
➤ Urea	40 mg/dL	➤ Serum PTH levels	6 pg/mL
➤ Creatinine	1.5 mg/dL	➤ Urine calcium-creatinine ratio	0.71
➤ Uric acid	6.7 mg/dL		

**Diagnosis** – Hypercalcemia due to Hypervitaminosis D.

**Management** – She was given normal saline infusion with furosemide 40 mg twice a day. Repeat calcium remained high at 15.9 mg/dL, so prednisolone 20 mg twice a day was added and one dose of intravenous Pamidronate, a bisphosphonate (36mg) was infused over 10 hours. Two days later her calcium decreased to 8.9 mg/dL. She became pain free within one week with normal appetite. On follow-up, her calcium continued to be normal. Her creatinine reduced to 0.67 mg/dL, in two weeks. However the 25(OH)D remained in the toxic range of 120 ng/dL and it took 6 weeks for 25(OH)D to reach a normal level of 88 ng/dL.

### Discussion

Although uncommon, hypervitaminosis D should be considered in the differential diagnosis of hypercalcemia. The symptoms of our patient were due to hypercalcemia. With a history of taking large doses of vitamin D, a low PTH level, and a toxic level of 25-hydroxycholecalciferol, the diagnosis was hypervitaminosis D. With suppression of PTH, 1,25-dihydroxycholecalciferol levels should have been low, but our patient also took Calcitriol (activated vitamin D) and calcium. This would have contributed to the toxicity.



Saline corrects the volume depletion, and frusemide promotes urinary excretion of calcium. Steroids reduce the synthesis of 1,25-dihydroxycholecalciferol hence reduced gut absorption, and also reabsorption of calcium from renal tubules. Bisphosphonates are potent and useful in severe hypercalcemia. They inhibit calcium release from bone by interfering with osteoclast mediated bone resorption. Calcitonin and hemodialysis may also be required for treatment.

Treatment of hypervitaminosis D	
➤	Hydration
➤	IV Furosemide
➤	Steroids
➤	IV Pamidronate
➤	Refractory hypercalcemia may need hemodialysis

Vitamin D is a fat soluble vitamin, and is stored in the adipose tissue. Large or frequent doses can be toxic. The usual daily maintenance dose of vitamin D3 for adults and older children is 400U-800U, and for infants is 400U. The daily maintenance dose should not exceed 2000U-3000U for adults and 1000U for small children. The therapeutic dose in rickets is 1,000-5,000U daily (depending upon the age) for 8 to 12 weeks. Large doses of 100,000-600,000U divided over 1 to 5 days can be given if compliance is an issue. Weekly doses of 60,000U for 8 to 12 weeks can also be used for treatment, but not for maintenance.

COMMON CALCIUM-VITAMIN D PREPARATIONS					
SYRUPS			TABLETS		
Ostebon Syrup	Elemental Calcium Cholecalciferol	250 mg 125 IU	Ostocalcium Tab.	Cholecalciferol Elemental Calcium	400 IU 125 mg
Ostocalcium Syrup	Elemental Calcium Cholecalciferol Vit. B12	82 mg 200 IU 2.5 mcg	Shelcal Tab	Elemental Calcium Cholecalciferol	500 mg 250 IU
Shelcal Syrup	Elemental Calcium Cholecalciferol	250 mg 125 IU	Convical / Goldcal/ Gemcal	Calcitriol Elemental Calcium Elemental Zinc	0.25 mcg 500 mg 7.5 mg
Gemcal Syrup	Calcium Carbonate Zinc Elemental magnesium Cholecalciferol	250 mg 2 mg 75 mg 200 IU	CCM	Calcium citrate maleate Vit. D3 Folic Acid	250 mg 100 IU 50 mcg
Macalvit	Calcium Gluconate Calcium Lactobionate Cholecalciferol	1.18 gm 260 mg 100 IU			

Numerous Calcium-vitamin D preparations of varying strengths are now available in the Indian market, and vitamin D is being propagated for uses other than bone metabolism. With increasing use of vitamin D, more cases of toxicity may be seen. Errors are more likely with tablets and sachets of varying strengths and more potent preparations like Calcitriol (activated vitamin D). Patients may overdose themselves presuming the safety of vitamins. Physicians must know the correct doses for treatment and maintenance, and remember that prolonged use of large doses of vitamin D can be toxic.

### Laughter Moments:

- Boss: Why do you have rashes every time you get your salary?
- Employee: I am allergic to peanuts.



Wife returns from a clinic and tells her husband:

- The doctor recommended me to spend one month at the sea, two weeks in the countryside and go for one week abroad. Where will you take me first?
- To another doctor...



## RATIONAL ANTIBIOTICS USE IN CHILDHOOD PNEUMONIA

Dr. Dinesh Raj



Dr. Dinesh Raj  
Associate Consultant

Widespread use of antibiotics has led to the emergence of anti-microbial resistance as a global threat. Multi-drug resistant organisms are now more often being isolated from hospital compared to a couple of decade earlier. These include extended spectrum beta-lactamase (ESBL) producing *Escherichia coli*, *Klebsiella pneumoniae*, vancomycin resistant *Staphylococcus aureus* and *Enterococcus*, and carbapenem resistant *Acinetobacter* and *K pneumoniae*. These organisms have not only increased the cost of health care but also led to increased morbidity and mortality in inpatients. Judicious use of antibiotics at both the community and hospital setting is the need of the hour to halt this impending pandemic of anti-microbial resistance.

One of the commonest prescriptions for antibiotics in children is for acute respiratory infections. Childhood pneumonia is the leading cause of under – five deaths in the world with over 2 million deaths worldwide in this age group. Most of these deaths are from developing countries which have uneven access to health care, with under-utilization and misuse of antibiotics. Early diagnosis and appropriate case management with rational choice of antibiotics is the cornerstone for reducing pneumonia deaths. The under-utilization of antibiotics is evident from the data from the National Family Health Survey – 3 which suggested that only 12.5% children with pneumonia received antibiotics. On the other hand, there is data to suggest that even common colds and minor respiratory problems who seek healthcare end up getting treated with antibiotics. New and reserved antibiotics are commonly being prescribed in the out-patient setting. When prescribed, the antibiotics are often not being given for a standard duration and often stopped early.

### Diagnosing pneumonia and assessing its severity

WHO defines pneumonia as presence of cough with tachypnea/respiratory difficulty. It is important to assess the severity of pneumonia to decide the need of appropriate laboratory and radiologic investigations, decision regarding hospitalization, and choice of appropriate therapy. Clinical features reflecting increased severity of pneumonia include chest retractions, accessory muscle use, nasal flaring, head nodding, grunting, cyanosis, altered sensorium, and impending respiratory failure. The revised WHO classification now includes only two categories;

- **“Pneumonia”** defined as children having fast breathing and/or chest indrawing which can be managed with oral amoxicillin administered on an ambulatory basis, and
- **“Severe pneumonia”**, i.e. children with pneumonia having danger signs needing injectable antibiotics. Danger signs include inability to feed, lethargy, severe respiratory distress, central cyanosis, head nodding or grunting.

Despite the simple WHO guidelines, often the health care providers (HCP) are unable to recognize the signs of pneumonia and improperly assess pneumonia severity. Proper training of HCP is needed to acquire these essential skills. As the WHO definition of pneumonia is based on the age dependent respiratory rate, it is vital to count respiratory rate for full one minute (age < 2 months:  $\geq 60$ , 2 mo – 1 year:  $\geq 50$ , 1 – 5 year:  $\geq 40$ ).

Choice of antibiotics for pneumonia		
Antibiotic	Dosage	Dose interval
Amoxicillin	Oral: 30-40 mg/kg/day	12 hourly
Azithromycin	Oral: 10 mg/kg on day 1; 5 mg/kg from day 2 to 5	24 hourly
Ampicillin	IV: 150–200 mg/kg/day	6 hourly
Gentamicin	IV/IM: 7.5 mg/kg/day	24 hourly
Penicillin	IV/IM: 200,000 U/kg/day	6 hourly
Cefuroxime	IV: 100–150 mg/kg/day Oral: 20–30 mg/kg/day	8 hourly 8–12 hourly
Cefpodoxime	Oral: 8-10 mg/kg/day	12 hourly
Ceftriaxone	IV: 50–100 mg/kg/day	12 hourly
Cefotaxime	IV: 100–200 mg/kg/day	8 hourly
Cloxacillin	IV: 50–100 mg/kg/day	6 hourly
Vancomycin	IV: 40–60 mg/kg/day	6–8 hourly
Clindamycin	IV: 40 mg/kg/day	6–8 hourly

Common organisms causing pneumonia in different age groups	
Age group	Organisms
Under 2 months	Common: Gram-negative bacteria ( <i>Klebsiella pneumoniae</i> , <i>Escherichia coli</i> ), <i>Staphylococcus aureus</i> Uncommon: <i>Streptococcus pneumoniae</i> , <i>Haemophilus influenzae</i> , <i>Ureaplasma</i> , CMV, HSV
2 months to 5 years	Common: <i>S. pneumoniae</i> , <i>H. influenzae</i> , <i>S. aureus</i> , <i>K. pneumoniae</i> , <i>Chlamydiae</i> , <i>Mycoplasma</i> , <i>Viruses</i> (RSV, influenza, parainfluenza, adenovirus, human metapneumovirus) Uncommon: Measles, varicella, pertussis, <i>Mycobacterium tuberculosis</i>
Above 5 years	Common: <i>S. pneumoniae</i> , <i>Mycoplasma</i> , <i>Chlamydia</i> Uncommon: <i>H. influenzae</i> , <i>S. aureus</i> , <i>M. tuberculosis</i> , <i>Viruses</i> (adenovirus, EBV, influenza, parainfluenza, RSV, rhinovirus)





## Need of antibiotics

- In the absence of tachypnea, most children with fever and cough can be managed without antibiotics.
- Etiology of community acquired pneumonia is varied and is viral in almost half of the cases.
- The WHO definition of pneumonia is unable to distinguish between bacterial and viral etiology, and often leads to over-prescription of antibiotics. Therefore, children reaching health care facilities need to be carefully assessed for presence of wheezing and past history of wheezing.
- Wheezing is seen more often in viral and reactive airway diseases compared to bacterial pneumonia.
- Despite the shortcomings of the WHO definition, antibiotics need to be prescribed to all cases fulfilling definition of pneumonia in community setting in the developing countries.
- In the hospital setting, it is imperative to give a trial of bronchodilators in children presenting with wheezing before prescribing antibiotics.
- A prior history of respiratory distress is also a reliable tool to identify children with wheezing.
- Close to 30% children with viral pneumonia may have superadded bacterial infections. Therefore, in admitted children where antibiotics have been withheld due to a suspicion of viral pneumonia, clinical worsening should warrant antibiotics.

## Choice of antibiotics

Increasing isolates of *S. pneumoniae* are resistant to co-trimoxazole, which was earlier the first line antibiotic for non-severe pneumonia. Therefore, WHO currently recommends amoxicillin for non-severe pneumonia. The parents should be made aware of the danger signs and asked to return early in case of these signs. Otherwise, a follow up after 2 days is acceptable. Atypical pneumonia is more common in children above 5 years, so macrolides can be used in cases with a clinical possibility of atypical pneumonia. In case of **severe pneumonia, a combination of ampicillin and gentamycin** is indicated, especially in non-seriously ill children in regions with low prevalence of pneumococcal resistance.

Seriously ill children or those who fail on first line antibiotics should be put on third generation cephalosporins (Ceftriaxone, Cefotaxime). Presence of pneumatoceles or complicated pneumonia will need addition of anti-staphylococcal cover (Cloxacillin, Vancomycin or Clindamycin). A suspicion of meningitis should be kept in all infants of less than two months of age, suffering with severe pneumonia.

## Need of hospitalization

Children with non-severe pneumonia can be easily managed at home with oral antibiotics. Indications of hospitalization are:

1. Severe pneumonia (i.e., those with danger signs)
2. Recurrent vomiting and inability to tolerate medications/fluids,
3. Presence of complications (empyema, pneumatoceles),
4. Need of supplementation oxygen,
5. Presence of dehydration,
6. Non response to oral antibiotics,
7. Social issues (lack of reliable caregivers at home)

## Duration of antibiotics

Children managed on outpatient basis need to be treated for at least 3-5 days. Those hospitalized should be given antibiotics for at least 3 days of afebrile period or for a total duration of 7-10 days (except azithromycin, where 5 day course is sufficient). However, there are no consensus guidelines and these need to be individualized on a case to case basis. Staphylococcal pneumonia usually is associated with complications and needs longer duration of antibiotics (4-6 weeks) and interventions (thoracocentesis, VATS, thoracotomy) as well.

To summarize, antibiotic resistance is growing problem all over the world. One of the commonest indication of antibiotics prescription in children is community acquired pneumonia. Underutilization and misuse of antibiotics is widely prevalent in childhood pneumonia. Using simple guidelines provided by the WHO, antibiotic use can be optimized. Rational approach of pneumonia management can go a long way in reducing under five deaths and antibiotic resistance.

## RETINOPATHY OF PREMATURITY

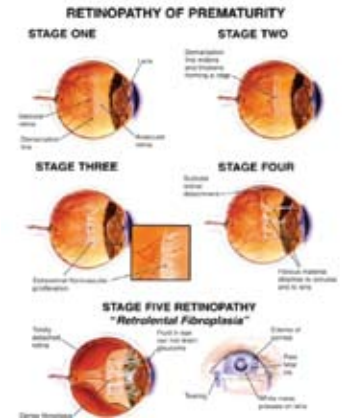
**Dr. P.C. Bhatia**



**Dr. P.C. Bhatia**  
Senior Consultant

Retinopathy of prematurity (ROP) is a disorder of the developing retinal blood vessels of the preterm infant. ROP can potentially cause blindness in a small but significant number of babies. It was also in news recently as the National Consumer Disputes Redressal Commission (NCDRC) awarded a huge compensation to the mother of a premature child who accused the hospital for medical negligence in screening of the baby's eyes at the appropriate time for early detection of ROP to prevent blindness. However, not going into the details of the case, this is definitely a wakeup call for all the hospitals managing premature babies. Standard guidelines are available which should be used in all NICUs along with adequate documentation. We will briefly outline certain basic aspects of ROP screening.

<p><b>What are the risk factors?</b></p> <ol style="list-style-type: none"> <li>1- Prematurity – single important risk factor</li> <li>2- Low birth weight (LBW)</li> <li>3- Oxygen therapy</li> <li>4- Anemia needing blood transfusion</li> <li>5- Sepsis</li> <li>6- Apnea</li> </ol> <p>ELBW babies may develop ROP without these risk factors</p>	<p><b>Whom to screen?</b></p> <ol style="list-style-type: none"> <li>1- BW ≤ 1500 gm or gestational age (GA) ≤ 30 weeks (AAP guidelines)</li> <li>2- Selected infants with a BW between 1500 - 2000 gm or GA of &gt;30 weeks with an unstable clinical course</li> <li>3- NNF recommends ROP screening in all babies ≤1750 gm or gestational age (GA) ≤ 34 weeks (As data from India suggest ROP in 32-34 gestation babies as well).</li> </ol>
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<p><b>When to screen?</b></p> <p>First screening examination should be carried out at 31 weeks of gestation or 4 weeks of age, whichever is later. For ease of remembering, the first screening should be done at 1 month of postnatal age in babies born at &gt;26 weeks of gestation age.</p> <p>Babies born before 25 weeks should be screened earlier (6 weeks chronological age, even before 31 weeks), as they are at an increased risk of a severe form of ROP, referred to as aggressive posterior ROP (AP-ROP).</p> <p>Follow-up examinations should be recommended by the examining ophthalmologist on the basis of retinal findings.</p>	<p><b>How to screen?</b></p> <p>The ROP screening should be done by an ophthalmologist who has sufficient knowledge and experience to identify accurately the location and sequential retinal changes of ROP.</p> <ul style="list-style-type: none"> <li>- Done after pupillary dilation by using binocular indirect ophthalmoscopy with a lid speculum and scleral depressor.</li> <li>- Pupillary dilation should be sufficient to allow adequate examination of the fundus.</li> <li>- Poor pupillary dilation can occur in advanced ROP, one must be cautious in putting multiple doses of dilating drops as excessive doses may affect the systemic status of the neonate.</li> <li>- A combination of Tropicamide 0.5% and phenylephrine 2.5% drops is used 2-3 times around 10-15 minutes apart.</li> <li>- Procedure must be done using standard sterile techniques under a radiant warmer in the NICU.</li> </ul>
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### How is ROP treated?

- Peripheral retinal ablation ("burning") of avascular retina anterior to the ridge is the treatment.
- The most effective proven treatments for ROP are laser therapy or cryotherapy.
- Laser ablation has replaced cryotherapy due to lower rate of postoperative ocular and systemic complications and less damage to the adjacent tissues. It can be done under sedation only and rarely may require general anaesthesia.

### How can ROP be prevented?

Judicious oxygen therapy	Judicious use of blood products	Vitamin E supplementation
Prenatal corticosteroids	Emerging therapy – Bevacizumab (inhibits VEGF)	



## DEPARTMENT OF OBSTETRICS AND GYNECOLOGY



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The Department of Obstetrics & Gynecology embodies the dream of its pioneer Dr. Anna Dengel and her team for establishing preventive, promotive and curative MCH care at Holy Family Hospital. Since its inception, thanks to the aspirations and expectations of the general public, this department has expanded its footprint to deliver a wide spectrum of obstetric & gynecological services, under one umbrella of MCH care. Its primary mission is to promote, protect, support and encourage natural childbirth in all its forms through safe and ethical service delivery. Well manned and equipped delivery suites with multi-functional monitoring system, where round the clock services are provided. Dedicated 24 hours care under direct supervision of Senior Consultants is the hall-mark. The hospital provides Baby Friendly Services with a dedicated and skilled nursing staff and lactation counselor with early rooming in of newborns.

The department comprises of a team of highly professional and well qualified full time Senior Consultants, Visiting Consultants, DNB, Senior & Junior Residents, all working to provide both inpatient and outpatient

as well as Emergency services round the clock. They are well supported by qualified and skilled nursing Staff, anesthesiologists and other ancillary support services. Ultrasound for TVS/TAB as well as CT/MRI for diagnostic evaluation are available.

The department also conducts a daily DNB teaching programme by actively mentored clinical, theoretical and project oriented dissertations; an important pre-requisite for the grant of a post graduate qualification of 'DNB' by the National Board of Examination.

Special clinics for high risk patients like diabetes, heart disease, cancer screening & infertility are conducted. Pap smear & HPV screening along with Colposcopy & Cryosurgery are available as OPD procedures. Operative and instrumental deliveries especially Safe Caesarian Sections by qualified team of Senior consultants and anesthesiologists. Community & outreach services for preventive and promotive health care, counseling & bereavement services by experienced & skilled counselors is provided.

**Compiled by: Dr. Ratna Rao**

## FERTILITY PRESERVATION IN OVARIAN CANCER

Dr. Shanti Jeyaseelan and Dr. Swati C.

### INTRODUCTION:

Operative treatment has traditionally been the mainstay of management in ovarian carcinoma. Hysterectomy and bilateral salpingo-oophorectomy continues to be the most common therapy for ovarian cancer. Opposite ovary is removed because of the frequency of bilateral synchronous tumours and the possibility of occult metastasis, which in the normal looking opposite ovary varied from 6-40 % depending on the stage of disease. Because uterine serosa and endometrium are often sites of occult metastasis and because the prevalence of synchronous endometrial cancer is relatively high, hysterectomy is also indicated. Because 3-17% of patients with ovarian cancer are less than 40 years of age, some patients may consider options for fertility preservation. Conservative therapy designed by preservation of some ovarian tissue, appears to be safe, although no prospective trials have compared conservative surgery with bilateral salpingo-oophorectomy. Some centers are studying the role of ovarian cystectomy alone for low grade state I epithelial neoplasia. Others have permitted stage I lesion grade II & III lesions and stage Ic neoplasms to undergo ovarian tissue sparing surgery, followed by chemotherapy in an attempt to preserve fertility. Chemotherapy administered after such ovarian tissue sparing procedures may destroy the remaining ova, especially in patients older than 35 years. We present a case of a young female with ovarian cancer, in which we performed fertility sparing surgery with excellent outcome.



Dr. Shanti Jeyaseelan  
Senior Consultant

### Case

A 24 years old lady was admitted with complains of progressively increasing abdominal distension and oedema feet for 15 days, and pain abdomen for 3 days. Her menstrual cycles were regular. On examination, she had pallor and pedal oedema. On per abdomen examination, a large non tender mass, variable in consistency, filling the abdomen, arising from pelvis and reaching up to the epigastrium, was noted. Cervix and vagina was healthy on PS examination. Per vaginum examination revealed a large adenexal mass arising from pelvis, margins not clearly defined, uterus felt separately and behind the mass. No nodularity noted in pouch of Douglas.

### Investigations

CA 125 - 61.4 U/mL. CEA,  $\alpha$ -fetoprotein and  $\beta$ -HCG: normal. CT Scan: Large thick walled cystic lesion measuring 16.1 X 32.3 X 21.9 cm with few septations and solid components within, compressing the organs around and occupying the whole abdomen.

Operative Findings: On laparotomy, big thick walled cyst with variegated consistency seen arising from right ovary, right fallopian tube was stretched over the mass. Uterus, left side tube and ovary were normal. Right sided ovariectomy, salpingectomy and infracolicomentectomy was done.

Post-operative period was uneventful. Discharged on day 5 in satisfactory condition.

### Histopathology of Tumour

Gross specimen: cystic mass 35X22X15 cm weighing 10 kg, fallopian tube measuring 14 cm stretched over the mass. Cut section showed multiloculated cyst filled with blood clots and chocolate brown thick fluid.

Microscopic Examination: Revealed mucinous columnar epithelium with goblet cells. Nuclear stratification with pleomorphic nuclei showing frequent mitosis. A cyst with pultaceous material was lined by epidermal lining and skin appendages beneath.

Diagnosis: Mature cystic Teratoma with mucinous cyst adeno carcinoma stage I(a) of right ovary.

Post Op treatment: Had 6 cycles of chemotherapy consisting of cisplatin and endoxan.

Follow up: After 2 year of completing therapy, she conceived spontaneously. She is now 20 week pregnant and is following up in our antenatal clinic.



## Discussion:

It is estimated that 7-8% of stage I ovarian cancer cases occur in women younger than age 35. Unilateral salpingo-oophorectomy may be the definitive treatment of a young woman of low parity found to have a well differentiated serous, mucinous, endometrioid or mesonephric carcinoma of the ovary. The tumour must be unilateral, well encapsulated, free of adhesions and not associated with ascites or evidence of extra gonadal spread. If opposite ovary is of normal size, shape and configuration, surgical evaluation is not routinely done.

After the patient has completed child bearing, some consideration should be given to the removal of the other ovary to eliminate the risk of another ovarian malignancy. Because the incidence of epithelial ovarian cancer of the ovary increase when she reaches the sixth decade and because a patient with a history of such a lesion harbours the unfortunate milieu that could promote another epithelial lesion, it is reasonable to remove the vestigial ovarian tissue after child bearing.

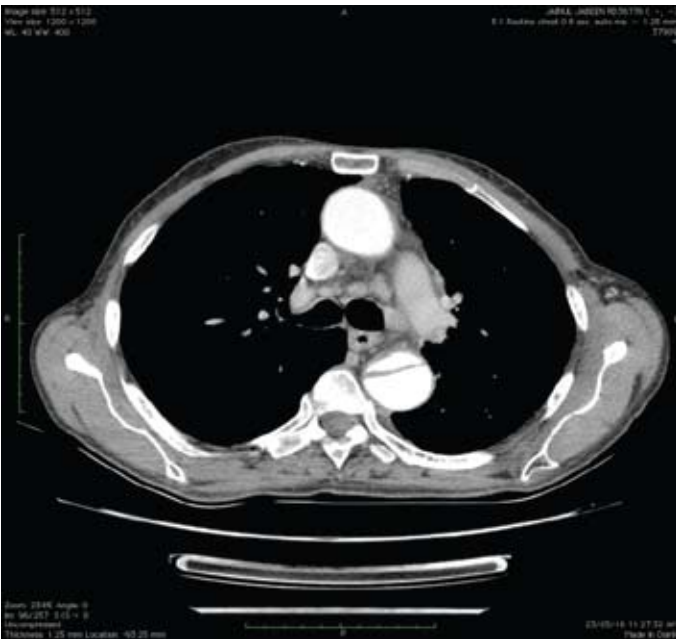
### Optimal Requirement for Conservative Management of Epithelial Ovarian Cancer Stage I a.

- Well differentiated.
- Young woman of low parity.
- Otherwise normal pelvis.
- Encapsulated and free of adhesions, lymphatics or mesovarium.
- Peritoneal washings negative.
- Adequate evaluation of opposite ovary and omental biopsy results – negative.
- Close follow up possible.
- Excision of residual ovary after completion of child bearing.

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## QUIZ 1.2



Courtesy: Dr. Renee Kulkarni, HOD Radiology

An 80 year old male presented to ENT out-patient department with complaints of hoarseness of voice. Direct laryngoscopy suggested left vocal cord paralysis. Chest radiograph was normal. CT Chest clinched the diagnosis. What are the findings on CT Chest?

Kindly send your answers at:

[newsletter@holyfamilyhospitaldelhi.org](mailto:newsletter@holyfamilyhospitaldelhi.org)

**Answer to previous issue's quiz:**

- 1. Acrodermatitis Enteropathica**
- 2. Treatment – Oral zinc**

## ADVANCED LAPAROSCOPIC SURGERY IN GYNECOLOGY

Dr. Neena Singh



Dr. Neena Singh  
Senior Consultant

Thousands of women undergo major surgical procedures for various gynecological indications daily. In the past, most of these operations were performed by open surgery or laparotomy. Over last two decades, majority of these open procedures have been replaced by minimally invasive surgery i.e., laparoscopy. With emerging evidence of its safety and acceptability, most centers around the world have switched to laparoscopy. The trained team of doctors at the Department of Gynecology at the Holy Family Hospital offer advanced operative laparoscopic surgery in a vast majority of conditions at an affordable cost. We provide you a brief insight in laparoscopy which has dramatically changed operative procedures around the world.

### What Is Laparoscopy?

Laparoscopy is a surgical procedure that involves making one, two or three very small cuts in the abdomen, through which a laparoscope and specialized surgical instruments are inserted. A laparoscope is a thin, fiber-optic tube, fitted with a light and camera. Laparoscopy allows visualization of the abdominal organs, and therapeutics, without making a larger incision that can require a longer recovery time and hospital stay.

### Indications of laparoscopy

Laparoscopic surgery is used not only for diagnostic purposes but also for treatment in many conditions. The indications of laparoscopic surgery are numerous.

1. Diagnostic laparoscopy - evaluation of infertility and chronic pelvic pain	6. Fibroid uterus
2. Endometriosis	7. Blocked tube
3. Pelvic inflammatory disease	8. Polycystic ovaries
4. Ectopic pregnancy	9. Hysterectomy
5. Ovarian cysts	10. Displaced IUCD

### Procedure

Laparoscopy is performed in a hospital, under general anesthesia. A pre-anaesthetic check up is done to ascertain patient's fitness. Bowel preparation is needed as it facilitates vision and manoeuvrability. The operation begins usually with an infraumbilical incision from where the Veress needle is inserted creating the pneumoperitoneum using CO2 gas. Usually two to three extra trocars (5mm usually or 10mm) are placed for most operative gynaecological laparoscopic surgeries.



### Post-Surgery

Patient can be allowed fluids by mouth about 4 hours after surgery, and normal diet the next morning. Patient can be discharged within 24-48 hours. Patient can resume normal activity at home and needs to come for stitch removal one week after surgery. Patients can usually resume their work/office within 7-15 days of surgery depending on the type of surgery done.

### Surgical outcomes

Operative laparoscopy results in terms of removal of disease, functional recovery and pregnancy rates are same if not better than conventional surgery.

### Finally

Key hole surgery is a patient-friendly surgery in terms of recovery time, cost, risk of infections. What was once considered "Surgical Gymnastic" is how the gold standard of surgery in many applications in gynaecological procedure. These procedures are safer and risk free than the orthodox ways used years ago and that is the reason for its popularity among doctors and patients alike.

LAPAROSCOPY IN GYNECOLOGY (Key Hole Surgery)  
**HOLY FAMILY HOSPITAL**  
Caring since 1983

WE MAKE SURE  
**YOUR LIFE**  
GOES ON WITHOUT A PAUSE

Who benefit from Endoscopic Surgery in Gynecology:

Heavy bleeding during periods	Ovarian Cyst
Tumor in the Uterus (Fibroid Uterus)	Extreme pain during periods
Problem in conceiving	Blocked Tubes
Displaced Copper-T	Cancer of Cervix & Cancer of Uterus
Removal of Uterus (Hysterectomy)	Leakage in Urine

Advantages :

Smaller incision-Aesthetically better	Reduced Blood Loss
Significantly faster recovery	lessor pain - less medication

Early to resume work thus less costly



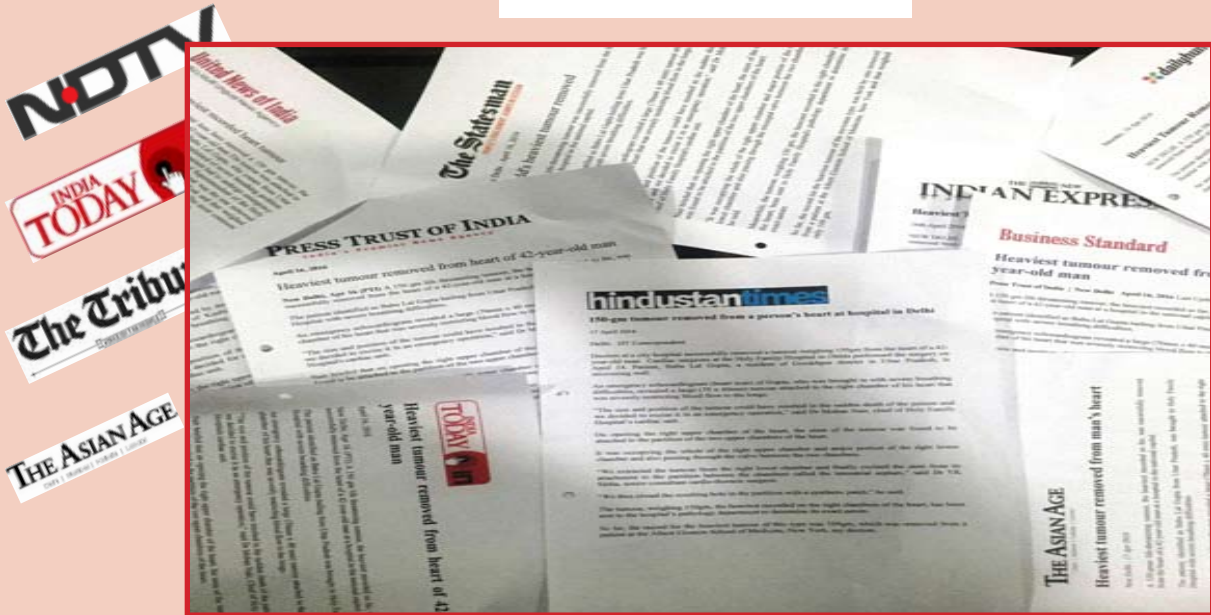
# Hospital in News

LIFE THREATENING, LARGE HEART TUMOUR SUCCESSFULLY MANAGED AT HOLY FAMILY HOSPITAL, NEW DELHI

**PRESS TRUST OF INDIA**  
India's Premier News Agency

**dailyhunt**

**THE NEW INDIAN EXPRESS**



**hindustantimes**

**The Statesman**  
PEOPLE'S PARLIAMENT, ALWAYS IN SESSION

**UNI**  
United News of India  
India's Multi Lingual News Agency

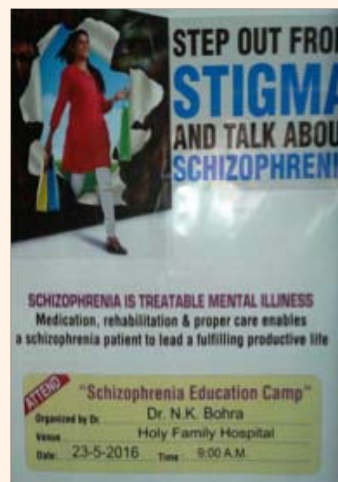
## COMMUNITY HEALTH DEPARTMENT

School Health Camp for Children with special needs was organized and conducted at Okhla Centre opposite to Holy Family Hospital, on 26th and 27th April 2016. The School provides educational, therapeutic and vocational services. Around 55 children with disabilities were examined and parents and staff counselled.



## SCHIZOPHRENIA DAY

Schizophrenia Day organized at Holy Family Hospital on 23.05.16 by Dr. N.K Bohra & Dr. Neena Bohra to create awareness about this treatable illness.



# POLYCYSTIC OVARIAN SYNDROME – A COMPLEX CLINICAL CHALLENGE

Dr. Raka Guleria and Dr. Shayista Nabi

Polycystic Ovarian Syndrome (PCOS) is one of the commonest endocrine disorders in women, affecting 5-10% of women worldwide. It is often frustrating for the patient, and a complex therapeutic challenge for the treating physician. PCOS was first identified by Stein and Leventhal in 1935, when they described seven women with amenorrhea, hirsutism, obesity and a characteristic polycystic appearance of their ovaries in a landmark paper.



Dr. Raka Guleria  
Senior Consultant

It is defined as heterogeneous syndrome complex characterized by hyperandrogenism (clinical and/or biochemical), ovarian dysfunction (oligomenorrhea and/or anovulation) and polycystic ovaries, with exclusion of related disorders. It is frequently associated with insulin resistance and obesity.

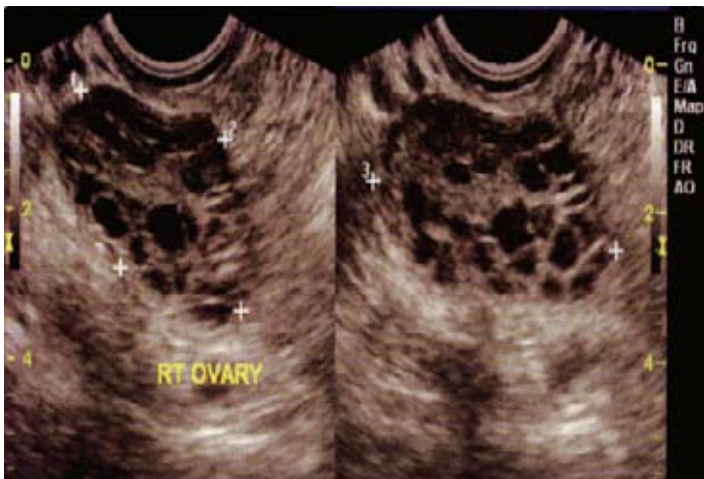
The pathophysiology, clinical features and laboratory workup is tabulated in adjacent boxes.

**Common clinical features**

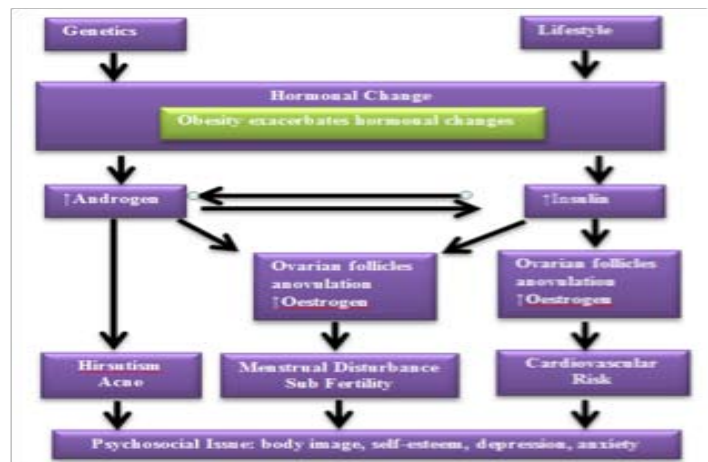
- Irregular menstrual cycles (oligomenorrhea),
- Weight gain or difficulty losing weight,
- Hirsutism - excess hair growth on face and body,
- Darkened patches of skin (acanthosis nigricans),
- Sleep apnea , Increase in stress levels,
- Skin tags, Infertility, Easy fatiguability,
- Thinning of hair (male pattern balding),
- Insulin resistance, Type 2 Diabetes, Hypertension,
- Pelvic pain,
- Anxiety and Depression,
- Decreased sex drive

**Laboratory workup**

- LH
- LH: FSH ratio
- Fasting insulin
- Fasting blood sugar (FBS)
- Post prandial blood sugar levels (PPBS)
- Free testosterone and androgen levels
- Lipid profile
- Serum prolactin
- DHEAS
- TSH
- USG for determining the no. of follicles & ovarian volume



Ultrasound image showing polycystic pattern of ovaries



Pathophysiology of PCOS

## Diagnostic criteria

In 2003, Rotterdam proposed revised criteria for PCOS that included ultrasound morphology of ovaries as potential criteria to define PCOS (presence of two of three):

- Menstrual irregularity (due to oligomenorrhea and/or anovulation)
- Clinical and/or biochemical signs of hyperandrogenism
- Polycystic ovaries on ultrasound (The PCO morphology is defined as the presence of ≥12 follicles, 2–9 mm in diameter and/or an increased ovarian volume >10 mL [without a cyst or dominant follicle] in either ovary)

Other etiologies with similar clinical features must be excluded (thyroid disease, non-classical congenital adrenal hyperplasia, hyperprolactinemia, for example).

### Management

PCOS management should focus on support and education, and need to strongly emphasize healthy lifestyle, with targeted medical therapy as required. The management of PCOS depends on number of factors - age of patient, desire for pregnancy, predominant symptoms i.e. hirsutism, obesity, irregular cycle etc.

- Life style modification: Dietary modification and regular exercise go a long way in helping the symptom and sign regression. Weight loss also brings the menstrual cycle back to normal, thus also helping in conception.
- Hirsutism is a very distressing feature of this syndrome and can be treated with medications and cosmetic procedures. The drugs used are OCPs with minimal androgenicity (desogestrel, norgestimate, gestodene). In addition, antiandrogens (spironolactone, cyproterone acetate, flutamide) are also used.
- Menstrual irregularities can be treated with combined estrogen-progestin pill if pregnancy is not desired.
- Insulin sensitizing drugs have come up as a major treatment protocol in patients of PCOS during pregnancy. Treatment options include metformin, and myoinisitol, and are being used with good results.
- Laser hair removal is useful in removing the excess unsightly hair and helps in improving the morale of patient.

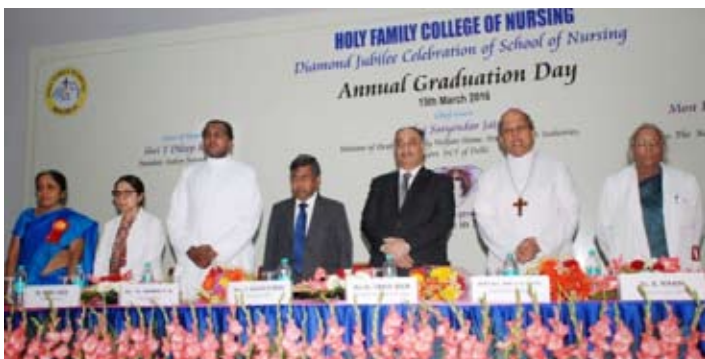
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## 60 YEARS OF EXCELLENCE IN NURSING EDUCATION

### Diamond Jubilee Celebration of School of Nursing, Holy Family Hospital

Holy Family Hospital is known for the excellence in nursing service and nursing education. The School of Nursing which started in 1956 has completed 60 years. The Diamond Jubilee celebration of the School of Nursing included various educational, social, spiritual and cultural programmes. The School was upgraded to College of Nursing in 2011. It is the first Private Nursing College to get affiliated to University of Delhi. The first Batch of BSc (Hons) Nursing students passed out in 2015 and all the graduates are well placed. The College feels proud to have one of its first batch students to be the university topper and listed to be awarded President's Silver Medal in the forthcoming Convocation Ceremony of University of Delhi.



The College has succeeded in getting Post Basic BSc Nursing and MSc approved from University of Delhi from the academic session 2016-17. This is the only Nursing College affiliated to University of Delhi to offer Post Basic BSc. Nursing Course. The admission process for these courses is already started.

The College promotes overall development of its students. Students of this College are participating in various state level competitions and winning prizes. Round the year the students are organizing various Health Education sessions in the Hospital and Community especially on the important National and International Health Days in the form of skits, street plays, exhibitions etc. The College has well qualified dedicated faculty.

57th Annual Graduation Ceremony was celebrated on 15th March 2016. Dr. Tarun Seem, Hon. Secretary, Ministry of Health and Family Welfare, Govt. NCT of Delhi was the Chief Guest of the day. To mark this occasion a souvenir was released by Honorable Chief Guest, diplomas, awards and prizes for the meritorious students were also distributed.

As part of celebration a cultural evening and thanksgiving Eucharistic Mass were held. His Excellency Archbishop Salvatore Pennacchio Apostolic Nuncio to India was the chief guest and chief celebrant of the day. His Grace most Rev. Anil J.T. Couto, President the New Delhi HFH society also graced the occasion.



**FACILITIES AVAILABLE**

Anaesthesia / Pain Management	Neurology with Neurosurgery
Dental Clinic	Obstetrics and Gynaecology with Laparoscopic Surgery
Comprehensive Cardiology Service (Including Interventions)	Orthopaedics, Trauma and Joint Replacements
Dermatology	Paediatrics with IPCU & NICU
Emergency Services	Physiotherapy
Eye and ENT Surgery	Plastic and Vascular Surgery
Gastroenterology with Endoscopy	Psychiatry with Clinical Psychology
General, Laparoscopic and Paediatric Surgery	Radiology with CT and MRI
Intensive Care (ICU/PCU/NICU)	Respiratory Medicine including Bronchoscopy
Laboratory Services	Thoracic Surgery
Medicine with ICU	Urology and Urosurgery
Nephrology and Dialysis	Alternative Medicine Including Homoeopathy & Ayurveda

**SMILE CLINIC****AESTHETIC CLINIC****SPINE CLINIC****30 BEDED STATE OF ART  
ACCIDENT, TRAUMA AND  
EMERGENCY****NEONATAL HEARING  
SCREENING  
PROGRAMME****EXECUTIVE  
HEALTH CHECK-UP****HOLY FAMILY HOSPITAL**

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