

THE NEWS LETTER



HOLY FAMILY HOSPITAL NEW DELHI



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24X7 SERVICES



HEALTH PACKAGES



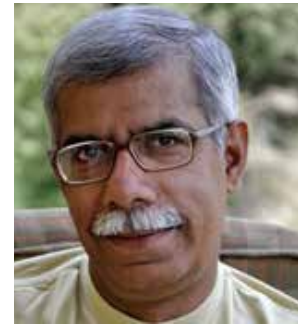
EMERGENCY

UNUSUAL SKIN LESIONS IN A NEONATE

Case

A healthy male baby was born at term gestation by normal vaginal delivery. In the antenatal period, there was no history of maternal fever, urinary tract infection, leaking per vaginam, rash or exposure to pets or animals. Baby was exclusively breast fed and immediate post-natal period was uneventful. There was no rash at birth.

On third day of life, baby developed pustules, initially noted over nape of neck and scalp area. They later progressed to extensively involve the trunk, groin, with a few lesions over the limbs, sparing the palms and soles. There was associated erythema of surrounding skin. (Figure 1 & 2). There was no history of fever, refusal to feed or lethargy.



Dr. Yogesh Parashar
Senior Consultant



Figure 1

On day 7, he developed unprovoked generalised tonic clonic seizures, for which he presented to our emergency department. Seizures lasted around 20 minutes and were aborted by midazolam.

On examination, baby was afebrile, lethargic and was hemodynamically unstable, with peripheral cyanosis. He was promptly managed with intravenous fluids, midazolam, oxygen by hood, following which he stabilised. Presumptive antibiotics were started because of pustules and suspected sepsis. Relevant work up was done, pus culture from pustules was



Figure 2

sent. Lumbar puncture could not be done due to extensive lesions over the back (Figure 2).

Serum Calcium was 5.2 mg/dl (N 7-10mg/dl), hence IV calcium gluconate was infused. Seizures were attributed to hypocalcemia.

Investigations revealed hyponatremia and low vitamin D levels. CBC, CRP were normal. Although subsequent CBC showed elevated TLC counts. Swab from the pustules reported growth of *Staphylococcus sciuri*. It was multi drug resistant, and susceptible to Vancomycin and gentamicin. These antibiotics were given for 7 days. Baby responded well to treatment. Skin lesions healed completely with exfoliation of the epidermis (Figure 3). Feeds were gradually built up. Electrolytes were corrected and vitamin D was given. Baby had recurrence of hypocalcemic seizures, and parathyroid hormone, phosphate, calcium and magnesium levels were sent.



Figure 3

Baby was discharged on day 11 of admission, with improved general condition and healed skin lesions, along with supplementation of calcium and calcitriol. Parents were advised to follow up with pediatric endocrinologist for further work up and evaluation of persistent hypocalcemia including the possibility of rare conditions with hypocalcemia and immune deficiency.

Discussion

Staphylococci are gram-positive bacteria. They are spherical (cocci) in shape and form grape like structures. There are at least 40 different species. They frequently colonize the skin, upper respiratory tracts of mammals and birds.

Phenotypically they are classified as coagulase positive which include *S.aureus* and *S.intermedius* group. All others are coagulase negative (CONS), of which *S. epidermidis* is most well known. One among the many CONS species is *Staphylococcal sciuri*, which is novobiocin resistant, oxidase positive.

This organism is principally an animal bacterial species. It is commonly present on skin and mucosal surface of pets and on food of animal origin. It is also known to occur in environmental reservoirs such as soil, sand, water, marsh grass.

S. sciuri may be found as a colonizing organism in humans in nasopharynx, skin and urogenital tract. In humans, it has found to be associated with wound infection (most common), endocarditis, peritonitis, pelvic inflammatory disease etc. However, it has not been reported to cause skin infection in humans unlike other staphylococcal species.

With improving automated microbiology *Staph sciuri* is being isolated and it has been associated with various infections discussed above and in nosocomial infections. However, we could not find reports of similar pustular lesions in humans. It has been described in piglets to cause exudative epidermitis (EE). The capacity of this organism to carry antimicrobial resistance to multiple drugs has been well documented. It has also been isolated as the only organism in the evolutionary origin of *mecA* gene. It is the central genetic determinant of methicillin resistance in *Staphylococcus aureus* and coagulase negative staphylococci of human origin.

Hearty Welcome to Holy Family Hospital



**Dr. Shalini Sud, MBBS,
MD- Obst. & Gyne.,
Sr. Consultant**



**Dr. Arun Kumar C
Singh, MBBS, MD
(General Medicine), DM
(Endocrinology),
Sr. Consultant**



**Dr. Vineet Narang, MBBS,
MS - General Surgery,
DNB - General Surgery,
Consultant - Urology and
Renal Transplantation**

Dr. Swati Kedia Gupta
MPhil, PhD (Clinical Psychology)

Mr. Ankur Wadehra
Audiologist



**Dr. S. K. Pal, MBBS, MS
(General Surgery), M.Ch
(Urology), Consultant**

Mr. Bhupendra Kumar Mishra
Speech Therapist

‘VALLEY OF FLOWERS’

Summer season is fast approaching, and it is time to plan our escape from Delhi. What fun it would be if we combine our vacation with some adventure, and treading the path that is not frequently taken by others. To beat the Delhi summer, it is customary to go to well known hill stations near Delhi. But, going there during summer time is like going to Lajpatnagar or Sarojini Nagar market. If we plan well, Uttarakhand and Himachal Pradesh offer numerous less visited places that are quite manageable for an averagely healthy adults (including senior citizens) and children. A few years ago, I joined a group in the month of August to go to Valley of Flowers and Hemkund Sahib, and what a beautiful experience that turned out to be.

This trek can be undertaken at any time between May and October, however, Valley of Flowers visit is best undertaken during August-September, when zillions of flowers are in bloom all around you.

We left Delhi in afternoon by Jan Shatabdi Express going to Dehradun, and got off at Haridwar, to stay at the GMVN rest house, Bharat Bhumi.

Here we were to meet other members of our group. The rest house was quite basic, but was enough for us to spend the night comfortably. Our group of 25 mostly had people above 50. Half of the group was of people above 65 years of age. It was nice to see elderly people venturing out for some adventure. After a light breakfast next morning, we left Rishikesh by bus for our first night halt at Joshimath, and had hoped to cover the distance in about 10 hours. But the sky was already overcast with frequent spells of rains, and one could not anticipate when a landslide or roadblock would greet us. Just two hours later, we hit our first of many landslides. Mercifully, the staff of BRO (Border Roads Organization) was already at work with



Dr. Sudhir K. Khandelwal
Senior Consultant
Psychiatrist



a bulldozer to remove the debris on road. It is to the credit of BRO that the roads in Himalayas remain travel worthy inspite of inclement weather. Due to better communication facilities, the help arrives on time with modern equipment. This route, which finally goes up to Badrinath shrine, is very scenic mostly due to many major tributaries of the Ganga accompanying you all the way up. All the rivers were swollen with water and it was quite a humbling experience to see the mighty force of gushing water. We first passed through Devprayag, which has confluence of Alaknanda (coming down from Badri Nath) and Bhagirathi (coming down from Gaumukh and Gangotri). These two sacred rivers join to form the mighty Ganga River; so it is from Devprayag only that the river is called Ganga.



Later we also passed through Rudraprayag, which has confluence of Alaknanda with Mandakini coming from Kedar Nath.

By evening we reached our third prayag of the day, Karanprayag, that has confluence of Alaknanda with Pindar River, coming from Pindari glacier (a very popular trekking destination). The great warrior Karna of Mahabharat fame was supposed to have worshipped Sun god here to get the impregnable shield. We reached Joshimath quite late in night, and were lodged in the GMVN guesthouse. It was poorly maintained and bed linen was damp and dirty. We made noise but could not do much.



We left Joshimath (I was happy leaving this guest house) early in the morning

soon after our cup of tea to reach Govind Ghat (6000 ft) from where we were to start our trek to Gangharia. Govind Ghat, as the name suggests, is surrounded on all sides by hills; it has a Gurudwara, which has plenty of accommodation for pilgrims on their way to Shri Hemkund Sahib. We did not stay here for long, and as soon as we could hire a porter to carry our bags, we started on our trek. There were too many porters and far too many ponywallahs. Since tourists were less than expected this time owing to news of incessant rains splashed over all print and electronic media, we were pestered all the way up by these pony-owners.

There were far too many eating places with ubiquitous paranthas, maggi, and packaged snacks. There were shops for fresh fruit juice as well as for dry fruits too. The ponies had killed the joy of a leisurely trek; one had to make room for them to pass by, the entire stretch was littered with their solid waste; mercifully, the rains were washing it away too, but at many places it had created slush making that stretch stink. I reached Gangharia after 6 hrs of trek covering 14 km, and had come to an altitude of 3048 m (10,000 ft). To cater to the ever-increasing number of pilgrims to Hemkund Sahib and trekkers to the Valley of Flowers, this 'once upon a time a tiny high altitude village' has developed into a noisy, thriving market place with dhabas and guesthouses everywhere. There is a Gurudwara here, Gobind Dham, which gives to shelter to pilgrims on their way to Hemkund Sahib; langar and hot tea is available throughout the day. Since no traveler is allowed to stay overnight at either Valley of Flowers or Hemkund Sahib, Gangharia offers many staying places besides the Gurudwara. Gangharia does not have a resident population of its own, but it comes to life during the trekking season.



Next day we were to trek to the Valley of Flowers, 3650 m (12000 ft). Its entry is ticketed and, mercifully not open to ponies. We trekked 4 km uphill through a forest to reach an open expanse of valley, from here one could trek for another 3 km inside the protected area. From the beginning of forest, flowers of all colours and hue were scattered all over – what a mesmerizing sight it was. I had not seen so many different kinds of flowers in my life, of all colours and hues; and mind you, these are wildly growing, with Nature looking after them.



The birch trees (bhoj-patra) were in abundance; at this height that is one of the few trees that thrives. The beauty of Valley of Flowers can only be appreciated by visiting it. It is said that nearly 100 varieties of flowers are found here. There are many kinds of birds, and this area is also home to brown bear, black bear, snow leopard, and blue sheep (bharel). Since inside the forest and valley area, no eating-places are allowed, we had carried packed lunch for ourselves. It was a bright sunny day, and having aloo-paratha with achaar in the Sun, surrounded by flowering shrubs in the backdrop of Gauri parbat was heavenly. The whole area is much sought after by botanists, photographers and nature lovers. Some of the well-known flowers are Brahm-kamal, blue poppy, cobra lily, anemones, geranium, delphinium, bell flowers, etc. The rhododendron flowering season was already over.

Next day I woke up early in the morning with some trepidation as it was going to be a tough day with steep climb. We were to trek uphill for 7 km and attain an altitude of 4329 m (nearly 15,000 ft). It was overcast and had started drizzling. No high altitude peaks were visible. We started our upward journey with loud cries of 'jo bole so nihaal, Sat Sri Akal'. The trek to the Gurudwara is steep all the way, with no flat section. I managed 4 km not with much difficulty; there were pilgrims of all ages; a few young couple were walking carrying their tiny tots in their arms. After 4 km, progress became a bit difficult; I had to stop after every few steps to catch my breath. People coming down would encourage you offerings of biscuits, candy, and even glucose, and constant chant of 'Wahe Guru'. When the shrine was just one km away, some outer structure became visible. I got a fresh lease of life; how easily I covered that last kilometer, I could not have imagined a little while ago. I was just in time for the 'Ardas' beginning at 12 noon. I decided to have a dip at the holy sarovar; the water was icy cold, but I did not waste time, I just went in and quickly immersed myself in the water, and before my head could become numb, I was out in a jiffy. After Ardas, I went around to visit Lakshman temple that needed maintenance and renovation. Around the glacier lake, 'Brahm-kamal' was flowering in abundance. The lake is supposed to be surrounded by 7 Himalayan peaks, but none was visible due to cloud cover.



The Hemkund Sahib Gurudwara is the highest Gurudwara in the world. Its history makes an interesting read and is available in many books and websites. Its location was rediscovered only in 1932, and the structure was built subsequently.

Planning a visit to Valley of Flowers-Hemkund Sahib.

One could plan a visit by oneself, travelling by road all the way up from Delhi to Govind Ghat either in one's own car, or by roadways buses. Throughout the journey there are numerous staying and eating places. From Govind Ghat, you could trek or hire a pony.

Easier options are to book your trek with any of the large numbers of tour operators. GMVN offers online booking (www.gmvnl.in) and so does India Hikes (www.indiahikes.com).

AUDIOLOGY AND SPEECH THERAPY CLINIC

Inauguration and Blessing of Audiology and Speech Therapy clinic in ENT Department was done on 18th February, 2019 by Rev. Fr. George P.A., Director, Fr. Sherin Thomas & Fr. Arockia Dass, Assistant Director, Holy Family Hospital,



Life is impaired without the power to experience hearing and sounds. Speech & Hearing Services started with the mission to provide comprehensive and professional audiological care from prevention to rehabilitation, for individual of all ages with speech and hearing concerns. Our individualized approach is directed to the unique need of each patient, ensuring improved hearing and speech.



Holy Family hospital audiology and speech clinic is equipped with state-of-the-art equipment allowing easy access to the most advanced diagnostic testing and treatment options available today. Our Audiology program provides a full range of hearing tests and universal neonatal screening. We offer complete rehabilitation services including hearing aids and cochlear implants.

Facilities- Neonatal screening by OAE

- Hearing assessment Behavioral audiometry, pure tone audiometry, speech audiometry, beksey audiometry
- Impedance audiometry
- Tinnitus and hearing rehabilitation
- BERA, ASSR, Electrocochleography and other specialised tests

Audiology and speech clinic is dedicated to helping all people, regardless of their age, to improve communication and vocational independence for life.

Speech –Language Pathology:

The domain of speech-language pathology includes human communication behaviors and disorders as well as swallowing or other aerodigestive functions and disorders. The overall objective of speech language pathology services is to optimize individual's ability to communicate and/or swallow in natural environments, and thus improve their quality of life.

Application of WHO (2000) Framework to the Practice of Speech –Language Pathology:

The practice of speech language pathology involves:

Providing prevention, screening, consultation, assessment and diagnosis, treatment, intervention, management counselling and follow –up services for disorder of:

- **Speech disorders** i.e. articulation, fluency, resonance and voice including aeromechanical components of respiration.
- **Language disorders** i.e. phonology, morphology, syntax, semantics and pragmatics aspects of communication including receptive and expressive skill in oral, written, graphic and manual modalities.
- **Swallowing or other upper aerodigestive** functions such as infant feeding and other aeromechanical event.
- **AUTISM:** Disorder requiring holistic approach of speech-language therapy which is most helpful for development. Early screening (up to the age of 3 years) and early intervention is most important for mainstreaming of child.
- **Cerebral Palsy:** Motor disorder i.e. mostly diagnosed in natal or pre natal period. Depending upon speech-language assessment, intervention should be as early as possible. Aero digestive, Aeromechanical, oral-motor function may improve first.
- **Hearing Impaired:** After aural rehabilitation (Hearing Aid fitting or Cochlear implant) it is necessary to start AVT (Auditory-Verbal Therapy). it includes listening training and verbal training that results in speech and language development.
- **Stammering/Cluttering:** Adult/Children both may be affected and proper speech training is needed.
- **Aphasia:** Mostly in neurological patients having stroke, which affect ability to find the right words, to understand what others are saying or reading and writing. Speech therapy helps them to rehabilitate.
- Providing services to modify or enhance communication performance (e.g. accent modification, transgendered, voice care and improvement of professional voice



Ankur Wadehra

Audiologist

Bhupendra Kumar Mishra

Speech Therapist



ACHIEVEMENTS AND AWARDS



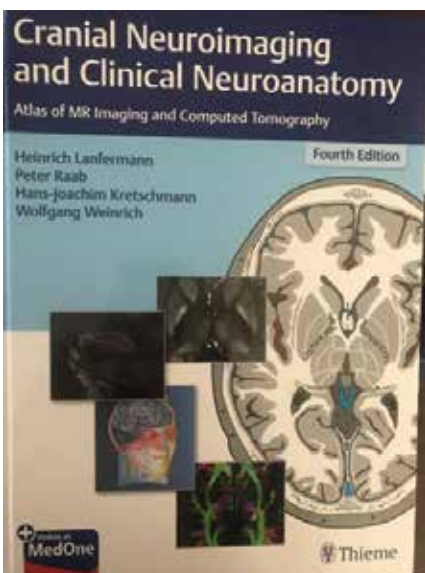
Prof. Mohan Nair, Sr. Consultant and Head of Cardiology Department receiving the Career Achievement Award at Monte Carlo from H E, Prince Albert II, the Monarch of Monaco!



Dr. Bheema Bhat, Sr. Consultant and Head of Ayurveda Department, Holy Family Hospital, delivering speech in International Conference of Ayurveda & Yoga on 20th April in Hiroshima, Japan.!



Dr Suman Kirti MD, FRCP receiving the EMINENT TEACHER award from IMA president Padma Shri Dr K K Agarwal, Prof R. Guleria Dean AIIMS and Prof O. P. Yadav Cardiac Surgeon NHI.



Dr. Renee Kulkarni, Sr. Consultant, Radiology translated "Cranial Neuroimaging and Clinical Neuroanatomy - An Atlas of MR imaging and Computed Tomography" from German to English for Thieme Publishers, Stuttgart.

This is a brilliantly illustrated, 500-page hardcover textbook intended for both clinicians and radiologists, now available to the English-speaking world.

CHANGING CONCEPTS IN THE MANAGEMENT OF LABC

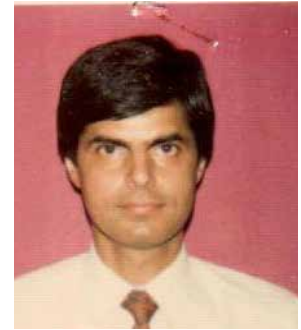
Breast cancer has ranked number one cancer among Indian females with age-adjusted rate as high as 25.8/100,000 women and mortality 12.7/100,000 women, with 25%–30% patients presenting as locally advanced breast cancer (LABC).

Although advances and awareness in the field of breast diseases has increased the early detection of breast cancer, cases of advanced breast cancer still presents.

These malignant lesions have both ulcerative and fungating features which become a challenge to manage. They are associated with pain, malodorous drainage and infection. These have a huge effect on the patient’s general and social life.

Clinically, four-quadrant tumor, fixity to the chest wall, and fungating or about to fungate have all been used in describing LABC.

For LABC, involving the entire breast issue or most of the breast parenchyma, palliative simple mastectomy- removal of the entire breast tissue along with the involved skin was done, as a surgical procedure. The rationale of such a palliative mastectomy was to relieve the patient of a bulky cancerous and ulcerating /fungating breast.



Dr. Rajive Sethi
Sr. Consultant



While the mastectomy was not curative, alleviation of symptoms was achieved and fast relief was attained. Palliative mastectomy was recommended in patients to get rid of “large four-quadrant” tumor which had already transgressed skin, often with secondary infection.

The procedure had challenges of achieving adequate margins and safe surgery. In patients with wide resection margins, proper primary closure was sometimes difficult. This was achieved either by primary closure or by split-thickness skin grafting or sometimes by a more complex reconstructive procedure. Another challenge was to have clear surgical margins and therefore mandated that it be performed with a “wide”

excision of the skin.



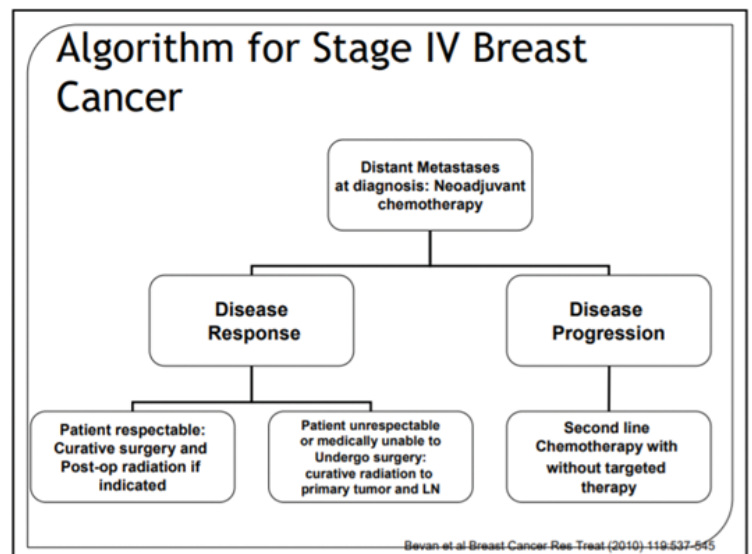
Even though the surgical procedure is palliative it is important to reduce, the occurrence of local recurrence developing in the operated area. This is because recurrences developing on a post mastectomy scar tend to be more painful than the primary tumor, once they infiltrate the chest wall. Therefore, not only must the mastectomy be done with healthy margins but care must also be taken that the entire tumor is debulked.

In the present day, management of breast cancer has

undergone a paradigm shift. With the advent of better multimodality treatment, palliative mastectomy is under question.

The optimal management of LABC requires a multidisciplinary approach and collaboration between medical, surgical and radiation oncologists.

In terms of chemotherapy in a large tumor, there would be significant tumor shrinkage which may, at a later point of time, open up the possibility of conservative breast surgery, a paradigm shift in surgery for breast cancer, with the dimension of surgery in a definitive setting, shrinking from radical to conservative breast surgery.



BREAST CANCER : FACTS & PREVENTION

In today's era, a woman currently has a 1 in 8 chance of developing breast cancer in her lifetime. According to the World Health Organization, breast cancer is the most common cancer among women worldwide, claiming the lives of hundreds of thousands of women each year and affecting countries at all levels of modernization.

In recent years, perhaps coinciding with the decline in prescriptive hormone replacement therapy after menopause, we can see a gradual reduction in female breast cancer incidence rates among women aged 50 and older. Death rates from breast cancer have been declining since about 1990, in part due to better screening and early detection, increased awareness, and continually improving treatment options.

Warning Signs:

1. Any lump in the breast or underarm
2. Thickening /swelling of part of the breast
3. Irritation or dimpling of breast skin
4. Redness or peeling skin on the breast
5. Pain or rashes around the nipple area
6. Nipple discharge other than breast milk, possibly containing blood
7. A change in the size or shape of the breast
8. Pain in any area of the breast that does not change with the monthly cycle

Risk Factors & Causes:

1. Older age
2. Genetics change
3. A history of breast cancer/breast lump
4. Estrogen exposure and breast feeding
5. Radiation Exposure
6. Alcohol Consumption
7. Body Weight
8. Hormone treatments
9. Occupational carcinogens

Prevention:

Breast Cancer Prevention can be achieved by detecting the symptoms and the routine screening. Breast cancer is a disease in which malignant (cancer) cells form in the tissues of the breast.

Following are the key points that can help to prevent the breast cancer:

1. Obesity raises the risk of breast cancer after menopause, the time of life when breast cancer most often occurs. Avoid gaining weight & try to maintain the body mass according to BMI.
2. Embrace a diet high in vegetables and fruit and low in sugared drinks, refined carbohydrates and fatty foods. Eat diet high in protein & whole grains.
3. Alcohol use is associated with an increased risk of breast cancer. Women should limit intake to no more than one drink per day, regardless of the type of alcohol.
4. According to the research, the long-term smoking is associated with increased risk of breast cancer in some women.
5. Women who breast-feed their babies for at least a year in total have a reduced risk of developing breast cancer later.



Dr. Sumant Gupta
Sr. Consultant



6. Menopausal hormone therapy increases risk for breast cancer. If you must take hormones to manage menopausal symptoms, avoid those that contain progesterone and limit their use to less than three years.
7. Get regular breast cancer screenings:
 - a. Breast Cancer Mammography usually involve two or more x-ray pictures, or images, of each breast. The x-ray images often make it possible to detect tumors that cannot be felt. Screening mammograms can also find microcalcifications (tiny deposits of calcium) that sometimes indicate the presence of breast cancer.
 - b. How to do Breast Self Examination?

1. Stand in front of a mirror that is large enough for you to see your breasts clearly. Check each breast for anything unusual. Check the skin for puckering, dimpling, or scaliness. Look for a discharge from the nipples.



2. Watching closely in the mirror, clasp your hands behind your head and press your hands forward.



3. Next, press your hands firmly on your hips and bend slightly toward the mirror as you pull your shoulders and elbows forward.



4. Gently squeeze each nipple and look for a discharge.



5. The breasts are best examined while lying down because it spreads the breast tissue evenly over the chest. Lie flat on your back, with one arm over your head and a pillow or folded towel under the shoulder. This position flattens the breast and makes it easier to check.



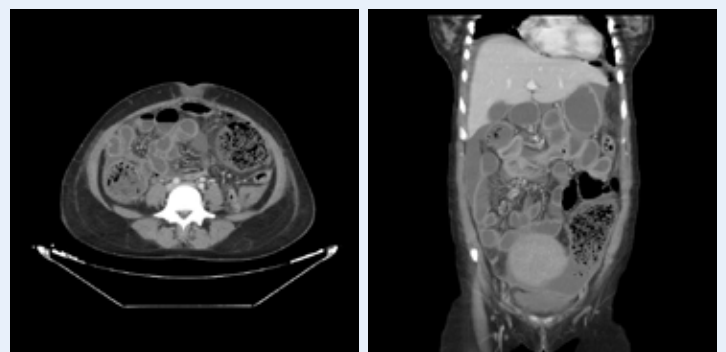
Farewell to Dr. Ratna Rao, Sr. Consultant, Obstetrics & Gynecology Department

QUIZ:

25 year-old female presented with features of intestinal obstruction. Past history of abdominal surgery was present.

Kindly send your answers at:
newsletter@holyfamilyhospitaldelhi.org

Answer to previous quiz: Kartagener Syndrome



3rd ANNUAL CONVOCATION CEREMONY, HFCON

Patience, persistence and perspiration make an unbeatable combination for success. Holy Family College of Nursing hosted the 3rd Annual Convocation for 50 B.Sc (H) Nursing(2013-2017) along with 31 General Nursing & Midwifery (2015-2018), 7 Medical laboratory Technology (2016-2018) and 8 X-ray Technology (2016-2018) graduates on 15th March, 2019, in the College Auditorium. It commenced with Eucharistic celebration presided over by His Grace Anil J. T Couto, Archbishop of Delhi along with Rev.Fr. George P.A Director, Rev. Fr. Sherin & Rev Fr. Arockia Das, Asstt. Directors and Rev.Fr. Thomas Decuna, Hospital Chaplain. Archbishop Most. Rev.Anil J T .Couto, advocated the motto of Holy Family Hospital during his sermon emphasizing on compassionate care as he encouraged others to follow the example of our Lord Jesus Christ



The main Convocation Ceremony started with welcome dance, the graduates flared with excitement adored in their robes, as they anticipated being conferred upon with their Degrees & Diplomas. They were accompanied by their parents, who had an aura of pride surrounding them. There was an amalgamation of emotion in the air, ranging from exhilaration and eagerness to jubilation & contentment.

The program saw the presence of notable figures from various fields of education and healthcare. Noble Peace Laureate, Shri Kailash Satyarthi, was the chief guest for the event. Most. Rev.Anil J.T.Couto, Archbishop of Delhi Diocese and President of New Delhi Holy Family Society, presided over the ceremony. The event was set in course further by the conveying of annual report of Holy Family College of Nursing, by Prof.(Dr) Raminder Kalra, Principal, highlighting the various accomplishments and functioning of the College. The launch of the new website of the College www.hecondelhi.edu.in and the online admission process for all Nursing Courses was reported. The recitation of the pledge followed thereafter, instilling a sense of accountability in all the graduates. The Trophies & certificates to all the meritorious students were awarded by Noble Peace Laureate, Shri.Kailash Satyarthi, the Chief Guest of the Ceremony. In his inspirational address Noble Peace Laureate, Shri.Kailash Satyarthi stated that “Nurses are the fire, God has chosen only you & not any politician or industrialist for the very special work of serving the humanity. Service with smile, softness & Sympathy will make you a nurse with the difference”

Acknowledging the efforts invested by the students in academics, Archbishop Most Rev.Anil J T.Couto presented them with Degree and Diplomas. He expressed his happiness over the progress of the College. Overall the program was a grand success, adding to a line of accomplished events for the institution and paving a path for many more to come.

EXERCISES AND DIABETES

Ms. Abha Sharma, HOD, Physiotherapy

DIABETES is a disease that affects your body’s ability to produce or respond to the hormone insulin, which is impaired, resulting in abnormal metabolism of carbohydrates and elevated levels of blood glucose in the blood.

The major risk factors for developing TYPE 2 DIABETES are:

- ❖ Sedentary (Inactive) Lifestyle
- ❖ Obesity
- ❖ Overweight
- ❖ Genetics
- ❖ Stress

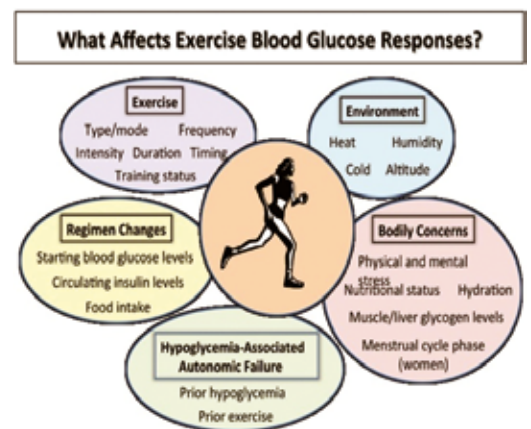


- 3 Main Components to Diabetic Therapy: Medication + Diet modification + Exercise + Continuous Glucose Monitoring



An Exercise Plan to lower body mass can decrease Insulin resistance of type 2 Diabetes.

- **REGULAR EXERCISE ROUTINE:** Helps by decreasing blood sugar levels, decreasing cholesterol levels, decreasing body weight, decreases incidence of depression, keeps blood pressure under control. Regular exercise routine helps to increase muscle mass, increase bone strength, improve balance, coordination and flexibility. Overall helping to improve our quality of life.
- **IRREGULAR EXERCISE ROUTINE:** Variable results of the above mentioned benefits in other words inconsistent and poor exercise routine gives us inconsistent and poor results.
- **NO EXERCISES IN OUR ROUTINE :** Then we should be prepared to face the detrimental consequences in our body especially detrimental effects on Heart, Kidney, Eyes, Nerves



BENEFITS OF EXERCISES FOR DIABETICS: Regular Physical Activity

- ↑ Insulin Sensitivity, ↓ Circulating insulin levels- ↑ muscles ability to effectively respond to insulin and ↑ uptake of glucose from the blood.
- ↑ Glucose utilization by the body - Improves the muscles response to insulin, muscles that are working during exercise can take glucose from the blood even in the absence of insulin to use sugar for energy, meaning those with impaired insulin function can still lower their blood glucose levels.

- ↓ Glucose production by the liver
- ↑ Cardiorespiratory fitness
- ↑ Glycemic control (HbA1C)
- ↑ Psychosocial well-being

TYPES OF EXERCISES:

- ◆ **AEROBIC EXERCISES**
- ◆ **ANAEROBIC EXERCISES**
- ◆ **FLEXIBILITY EXERCISES**
- ◆ **BALANCE EXERCISES**

AEROBIC EXERCISES: These exercises use large (big) muscle groups that require oxygen for sustained periods of time. Exercises like: walking, running, cycling, swimming, dancing, cross-training, zumba are all aerobic forms of exercises. The exercise should be intense enough to increase the pulse and respiration rate.

They help the body to utilize insulin better, reduces the risk of heart disease by lowering blood pressure and blood glucose with improvement in cholesterol levels.

ANAEROBIC EXERCISES: The exercises that are for building strength and power. Exercises which require resistance training equipments, weights, dumbbells, therabands are anaerobic exercises. The exercises increase glucose utilization by the body and increase the body's sensitivity to insulin thus lowering blood glucose levels.

FLEXIBILITY & BALANCE EXERCISES: All stretching exercises, yoga asanas are under this category. These exercises reduce the risk of injury related to exercises by keeping the joints flexible and preventing stiffness. They also help decrease stress, increase insulin sensitivity and thereby decreasing blood glucose levels.

RECAP - YOGA for DIABETES & TO LOWER BLOOD SUGAR LEVELS



RECOMMENDED PHYSICAL ACTIVITY PARTICIPTION FOR DIABETICS – ADA 2017

- **ADULTS :** >150 minutes / week – Moderate to Vigorous intensity; atleast 3 days / week and no more than 2 consecutive days without activity.
- **Minimum 75 minutes / week :** Vigorous intensity or interval training for younger and more physically fit individuals.
- **Children / Adolescents DM type 1 or 2** minimum 60 minutes / day moderate to vigorous intensity aerobic activity and muscle strengthening 3 days / week

It is important to have **SAFETY GUIDELINES:** LOG BOOK having an Exercise log and Blood Sugar levels log should be maintained. **DRESS APPROPRIATELY** with well fitting comfortable, cushioned shoes, socks, clothes. **BREATHE WELL:** It is important not to hold your breath while doing resisted exercises. 5 – 10 minutes warm up and cool down phase should be practiced. The Exercise intensity should be gradually increased. Carry a phone with EMERGENCY NUMBERS when outdoors or wear an identity card with name and EMERGENCY NUMBERS.

• **BEFORE STARTING EXERCISES SOME IMPORTANT CONSIDERATION:**

PRE EXERCISE BLOOD GLUCOSE mg/dl	CAUTIONS
< 90 mg/dl	Ingest fast acting carbs prior to starting exercises. Increase amount of carbs if moderate intensity of exercises / prolonged.
90-150 mg/dl	Start carbs consumption at the onset of most exercises.
150 - 250 mg/dl	Initiate exercises & delay consumption of carbs until blood glucose levels < 150 mg/dl
250 – 350 mg/dl	TEST FOR KETONES. DONOT PERFORM EXERCISES IF LARGE AMOUNT OF KETONES ARE PRESENT. <u>MILD EXERCISES.</u> Intense exercises delayed till blood glucose levels < 250 mg/dl as may trigger hyperglycaemia
> 350 mg/dl	TEST FOR KETONES. Consider conservative Insulin correction.

BEFORE STARTING EXERCISES SOME IMPORTANT CONSIDERATIONS:

IF BLOOD GLUCOSE > 250mg/dl	STRENOUS EXERCISES ARE NOT RECOMMENDED	May cause blood glucose to increase
IF KETONES are present	DO NOT EXERCISE	
IF ONE is SICK	DO NOT EXERCISE	
IF BLOOD GLUCOSE < 108mg/dl in Diabetics	Eat before going for exercises to prevent hypoglycaemia	Additional food maybe required during vigorous exercises
Maintain adequate water intake	1 cup water in hot & humid environment For 20-30 min exercises	Carry light snack and water while exercising to prevent any hypoglycaemic spell.
Appropriate footwear and regular inspection of feet	Good sports shoes with well padded soles	
Carry an ID Card	With name and contact number	Emergency contact number to be written on the ID

FITT – Principle for Exercises: Frequency, Intensity, Time, Type

Frequency	Perform <u>Aerobic Exercise</u> - at least <u>3 days per week</u> . <u>Resistance Exercise</u> at least <u>twice weekly</u> on nonconsecutive days, Ideally 3 times a week, along with regular aerobic exercise
Intensity	Aerobic exercise at least at moderate intensity (e.g. brisk walking).
	Additional benefits may be gained from vigorous-intensity aerobic exercise. (if comfortable and allowed as per medical condition)
	Resistance exercise should be moderate
Time	20 to 60 mins/ day - Aerobic Exercise performed continuously or intermittently in bouts of at least 10 mins accumulated to a minimum of total 150 mins per week
	3 sets of 8–10 repetitions on 8–10 exercises involving the major muscle groups – an optimal goal for resistance exercise
Type	Varied forms of Aerobic Exercise trainings recommended - (including brisk walking) that uses large muscle groups and causes sustained increases in heart rate (HR). Exercises like walking, swimming or cycling that do not impose undue stress on the feet are some appropriate choices.
	Each session of resistance exercise should involve the major muscle groups (legs, hips, chest, back, abdomen, shoulders, and arms).

SPECIFIC PRECAUTIONS AS PER MEDICAL CONDITION:

HEALTH COMPLICATION	SPECIFIC CONSIDERATIONS
NEUROPATHY	Care of feet, soles kept dry, good shoes
	Bed and sitting exercises will help
FOOT ULCERS	Avoid weight bearing exercises till ulcers are healed.
	Examine feet regularly. Avoid high impact activities.
	Sitting and bed exercises can be practised.
EYE DISEASES	Avoid exercises that dramatically increase blood pressure
	Avoid exercises during vitreous haemorrhage
KIDNEY DISEASES	No vigorous activity 1 day before urine protein test.
	Monitor electrolytes.
	Preferably low intensity exercises
CARDIOVASCULAR COMPLICATIONS	Low to moderate intensity exercises, Not to hold breath while exercising.
	Ensure hydration
	Heart rate should not exceed 220-age (as a precaution). Slow down or rest in between if it does increase.

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 ICU & 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/ICU/NICU)	Respiratory Medicine (Bronchoscopy, Sleep Lab, EBUS, Thoracoscopy, PFT-DLCO)
Laboratory Services	Thoracic Surgery
Medicine with ICU	Urology and Urosurgery
Nephrology and Dialysis	Alternative Medicine Including Homoeopathy & Ayurveda

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Editorial

UNIVERSAL HEALTH COVERAGE: EVERYONE, EVERYWHERE

Dr. Sanjay Sood, Sr. Consultant

The World Health Day is held to mark WHO's founding, and is seen as an opportunity by the organization to draw worldwide attention to a subject of major importance to global health each year. WHO is focusing on universal health coverage for this year's World Health Day, on 7 April.

Healthy life makes the people live with high confidence and peace to work accurately and quickly. One has to keep all the activities to be accurate for making every work possible with many types of possible ideas and plans. But millions of people still have no access at all to health care. Millions more are forced to choose between healthcare and other daily expenses such as food, clothing and even a home.

Universal health coverage is WHO's number one goal. Key to achieving it is ensuring that everyone can obtain the care they need, when they need it, right in the heart of the community.

This is why The theme of World Health Day is "Universal health coverage: everyone, everywhere".

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