



Clinical Connect

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Women's Health Special

Spotlight on
Women's Health



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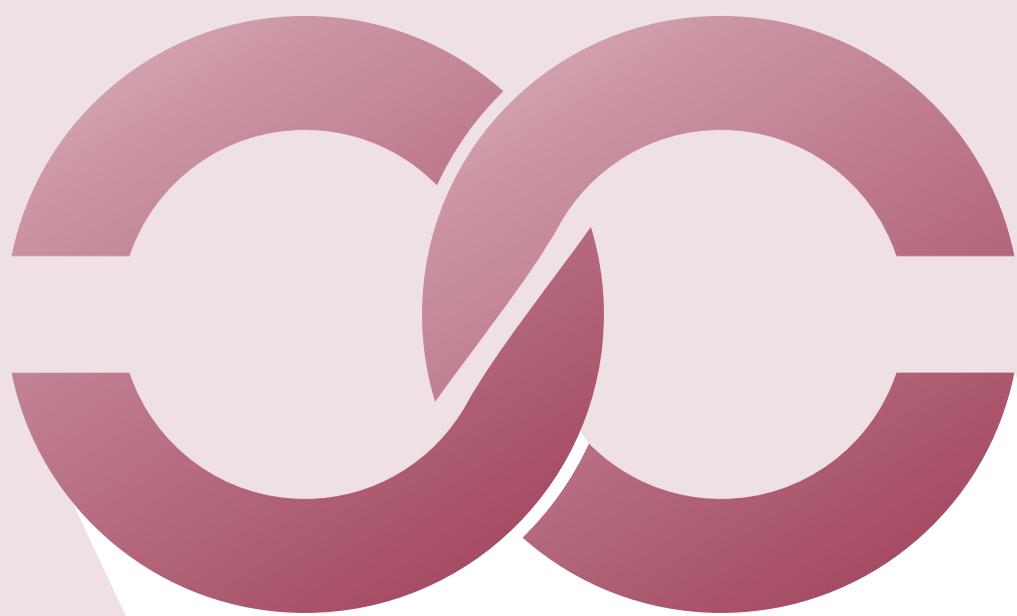
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MESSAGES

Message from the Editorial Team



Dr Niti Raizada
 Director, Medical Oncology
 and Haemato Oncology
 Fortis Hospitals, Bangalore

Women's health over the decades has drastically changed; the initial focus used to be on improving sexual and reproductive health. Now the disease burden has shifted to non-communicable diseases like Cardiovascular, Cancers, Diabetes, Musculoskeletal, Psychological issues like depression, dementia and Respiratory diseases, requiring due attention.

At Fortis, we make a conscious effort in tackling these health related issues

both at a preventive and therapeutic level by team work between different departments, both clinical as well as supportive like Radiology, Pathology and Clinical Laboratory; as well as teams within each department including nurse practitioners, social workers, physician assistants, junior doctors along with specialists.

Preventive Care and screening programs include regular gynaecology check-up, PAP smear, Bone Densitometry, Breast, Lung & Colon Cancer Screening and the like. Counselling regarding age appropriate immunisations, diet & nutrition services, sleep disorder, smoking cessation, breast care and sexual health are part and parcel of the holistic care provided. Pregnancy & child birth services and Infertility care complete the list.

Extensive studies over the last couple of decades has resulted in a clear understanding of how women's health differs from that of men. Genetic counselling, targeted therapy in Oncology and Immunology, Robotic surgery in uro-gynaecological conditions has resulted in reduction in morbidity and increased life span.



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Message



Ms Richa S Debgupta
 Chief of Strategy, Group Head - ESG
 and Business Head - CJK

Communities and countries and ultimately the world are only as strong as the health of their women.” – Michelle Obama

Women have unique health related concerns; both biological and gender

related differences affect women health significantly. The health of women in many societies is also impacted by the discriminations rooted in sociocultural dynamics in our country.

It is of paramount importance that the consciousness about her right to good health should be inculcated in women from childhood. Exclusive focus on women’s role as “care giver” in Indian household conditions young girls to place the needs of the family at the forefront, at the cost of her own health. She forgets that to do be able to take care of others she first needs to take care of herself.

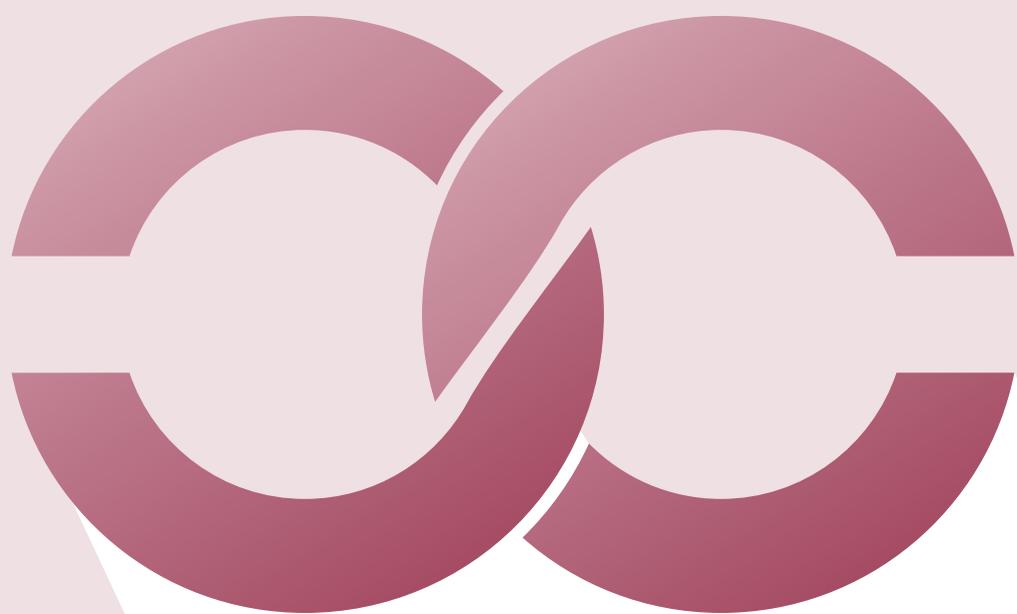
Typically, when we refer to ‘women’s health’ it invariably starts and ends with a reference to the reproductive health of women. While it is definitely important but an equal focus needs to be afforded to other organs and

organ systems like heart, liver, lung, kidney etc. Further on with growing age, skin care, hair care, oral health, eyesight and hearing related issues also become equally important.

A regular health check is the least a woman can do for her own health. Nutrition, mental well-being, occasional break from work (household as well as professional) are a must and should be incorporated into one’s day to day life. Women should be encouraged and supported to seek medical help early and appropriately.

‘Before putting the mask on for others, please ensure to put on your own mask’, is a reminder for the women community at large that she would be able to play her role well only if she prioritises her own health.





THE WAY WE DO
IT AT FORTIS

Women's Health for the Clinician



Dr Rubina Shanawaz Z

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 Fortis Hospital, Richmond Road, Bangalore

"Doctors are the worst patients" goes the popular adage. This especially holds true for the women in healthcare who are aware of the worst but ignore the warning signs till the issue becomes unbearable.

Women, with the multitude of roles they fulfil, need to be coerced to get a screening done for themselves.

A mandatory PAP smear once in 3 years and a mandatory yearly mammogram over the age of 40 is the need of the hour to look out for our healthcare workers.

Along with this, an Ultrasound of the abdomen and pelvis yearly should also be implemented. These basic simple screening tools will go a long way in detecting malignancies early which otherwise will remain hidden till symptomatic.

The use of vaccines such as the Cervical cancer vaccine and the Rubella vaccine should be encouraged.

For women of the reproductive age group, awareness on menstrual disturbances and their appropriate care is needed. These include hormonal disturbances like Polycystic Ovarian Disease and Hypothyroidism,

benign tumours such as Fibroid uterus and painful conditions such as Endometriosis and dysfunctional uterine bleeding. All of these if addressed early and managed appropriately, will go a long way in ensuring optimal health and wellness.

With increased work pressure and advancing age working against the biological clock, women need to be made aware of oocyte freezing which acts as a reassuring fertility insurance.

Maternity and Postnatal care cannot

be ignored and provisions need to be made to ensure ideal care of the pregnant and lactating mother including ensuring adequate rest and privacy as per the requirements.

Preventive and early diagnostic strategies will go a long way in ensuring wellness of the team member, reinforcing their faith in the system. It is time to break the bias towards preventive health and drive it forward, starting with our very own health force.





When to Let Time be the Best Healer



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In my career span of thirty years as a health care provider, more specifically, an obstetrician and gynaecologist, I have learnt a lot. A large part of knowledge came from books and journals, but some revelations arose through reflection and personal experience in treating my own patients.

Over the years of practice, experience taught me to use my discretion and clinical judgement to decide if I can allow time to be the best healer, or I need to pitch in with our evidence-based algorithms of interventional treatment or care.

The current generation believes in quick solutions to concerns and problems and wants short cuts during treatment. It is important that the generation is made aware of the fact that many problems heal well with time and patience; in medical parlance, we call it a conservative approach. When to choose correctly between a conservative or an intervention based or surgical approach, is something that only experience can teach.

A common example is when young couples come to me with anxiety and frustration writ on their faces, that

they have not been able to conceive after trying a few months for a pregnancy, it is a wise practice to let them know the smart ways of mother nature. It makes people feel reassured when they are told that despite both partners being perfectly normal in terms of their reproductive capabilities, only 80% of them will conceive naturally in one year of trying for pregnancy. Jumping on them to do a battery of tests, checking ovarian reserve and other such functions, may be counter-productive and only lowers morale.

Natural birthing is a time tested normal physiological process. Multiple factors play a role in the successful culmination of normal labour. Here again, giving the natural process the required time, as backed by robust evidence, has had most women achieve a normal delivery. The current generation is short on patience and patients demand a caesarean section, far too often. Such demands should be discouraged by counselling, highlighting the benefits of normal delivery, especially when conditions are favourable for conduct of such a normal delivery.

There are certain other situations wherein it is advisable not to wait and let time be the healer, as the condition may then, only worsen and even become difficult to reverse. Treatment by way of intervention can range from simple lifestyle change, to medical treatment or surgery. For instance, polycystic ovarian syndrome affects one in five women in the reproductive age group. Typically, this syndrome causes infrequent menstrual cycles, weight gain and hirsutism. It is prudent to let women suffering from such a condition realise what they are going through and resort to a quick and sustainable lifestyle change, which can help them turn around to normalcy.

Heavy menstrual bleeding is generally neglected by many women. May wait for time alone to heal the problem. This can lead to a remarkable decrease in the quality of life due to anaemia. Currently, there are many conservative options to overcome such concerns. Women around 45 years of age with heavy menstrual bleeding need to be managed with a conservative approach. The key game changer in the therapeutic armamentarium of heavy menstrual bleeding with no underlying pathology has been the invention of the progesterone releasing intrauterine device. When inserted, over 95% of patients are relieved of their bleeding. This can help them to sail through natural menopause without resort to a hysterectomy. Women should be offered all possible treatment modalities and as health care providers, we need to educate them on the pros and cons of each option. Resorting to major surgery is best done when conservative options fail. The Covid-19 pandemic has made all of us aware of the importance of being healthy. Women must ensure that they get their preventive health checks regularly. Getting PAP smears and breast examinations or mammograms (depending on age group) should be encouraged to detect cervical or breast cancer early.

It is now time for women to be health conscious, adopt a healthy lifestyle and seek medical help early. It is vital that our medical community offers all treatment options and initiates treatment with a balanced conservative approach, wherever possible. This will increase confidence levels and reaffirm faith in doctors, amongst women who seek help.

Finally, time is a great healer. To heal, give time, time. But remember, time heals nothing unless you move along with it.

Urbanization, Behavioural & Lifestyle Changes Augment Breast Cancer Incidence in India

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Breast cancer has surpassed cervical cancer to become the most prevalent cancer in India's female population, particularly in urban areas which have witnessed a radical lifestyle and behavioural shift in the past two decades. However, if detected early enough, it is also one of the most treatable cancers.

The incidence of breast cancer remains high in the western world, even as the numbers have risen significantly in developing countries like India in the past two decades. India too is following the global trends with the incidence rising steadily in the last few years due to increase in life expectancy, increased urbanization and adoption of western lifestyles along with increasing awareness which brings such cases to medical attention.

ICMR- NCDIR National Cancer Registry Program estimates a 12% increase in cancer cases in India by 2025. Breast cancer cases are about 2 lakhs at this juncture and the trend is upwards.

Trends in India, however, differ from the West in the following ways:

1. Age shift - More young ladies are affected than in the Western world; women in their 30s and 40s are being affected more in India. Breast Cancer has become the commonest cancer in urban cities like Mumbai, Chennai, Bangalore accounting for 25% to 32% of all female cancers in these cities with Bangalore having the dubious distinction of being the Breast Cancer Capital of India!

2. Late presentation/advanced stages: more than 50% patients of breast cancer in our country present in late stages (3 and 4) where the outcome is not as good.
3. Lack of awareness and Screening in India. Breast Cancer Screening is the single most important factor responsible for better survival of patients in the west.
4. Aggressive cancers in young. Generally, the younger the age, more aggressive is the cancer as they have more subset of triple negative and pregnancy related breast cancer etc. which have worse outcomes.

Like diabetes, hypertension and cardiovascular disease, rise in breast cancer incidence in India can also be attributed to some extent to lifestyle factors that increase a woman's risk of developing the disease. Marrying at a later age than before, delayed, and reduced pregnancies, and shrinking duration of breast feeding are some factors. At the same time, a turn towards sedentary lifestyles, increased obesity, smoking and drinking are all factors that contribute to increasing risk of breast cancer among women.

Studies have indicated that a woman who bears a child at 20 years of age has a much lower risk of breast cancer than a woman who bears her first child after 30. Similarly, higher the number of full-term pregnancies, the lesser is the risk. Nulliparous women have a much higher lifetime risk of breast cancer. At the same time, women who breastfeed have a lesser risk compared with women who do not breastfeed.

While one cannot control risk factors such as age and genetic susceptibility,

here is a list of modifiable risk factors that contribute to a woman's risk of breast cancer:

Overweight or obesity

Maintaining the right Body Mass Index is crucial to reducing risk of several diseases including cancer. Being overweight or obese after menopause increases risk of breast cancer.

Family History of Cancer

If one has a family history of cancer in close relatives, it is advisable to visit an oncologist or a genetic counselor and find out your risk. This is practically the only way of preventing cancers. If need be, your oncologist may offer you a blood test to look for heritable genes. If positive, then there are risk reduction strategies which are useful and can prevent cancer.

Sedentary lifestyle

Lack of physical activity which contributes to obesity as well as other forms of disrupted body mechanics is today also considered a risk factor. Regular exercise is necessary as it controls blood sugar and limits blood levels of insulin. Insulin in turn can affect the growth and behavior of breast cells. It also helps maintain the BMI.

Smoking & Drinking

While smoking and drinking are habits that are usually associated with cancers of the lung and liver, there are indications that excessive smoking and consumption of alcohol also increases a person's risk of other forms of cancers.

Basic useful strategies include:

Monthly self-breast examination (three minutes with first three fingers) to check for any lumps.



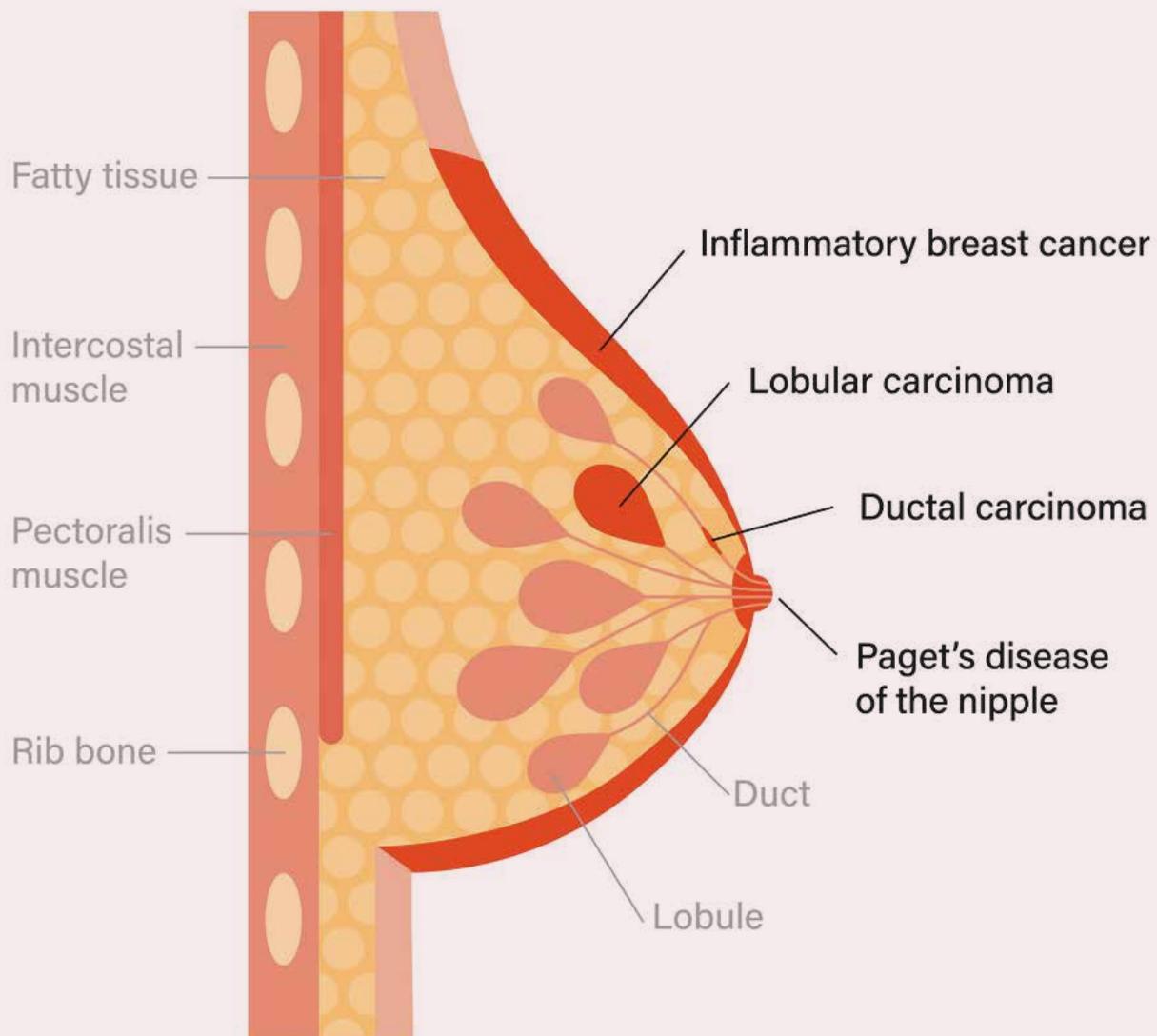
Clinical breast examination by a trained doctor every 6 months along with other medical tests and a screening mammogram whenever feasible. Annual Mammography from ages 40 to 50 years is recommended.

After 50 years of age, mammography may be done every 2 years.

It is important to understand that any decision regarding screening modality should be taken in consultation with your doctor based

on your risk factors by calculating your risk of breast cancer (or other cancers). The plan for a screening protocol can be planned accordingly.

Types of Breast Cancer



COPD in Indian Women



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COPD is typically considered to be a male predominant disease and automatically makes one think of smoking as the most common risk factor. In India, a large part of the population still lives in the rural setting, the figure from Lancet Global health, may surprise one as to how close the gender specific prevalence is after a certain age. (1) (Fig1)

Biomass fuel exposure and ambient air pollution affect women more than men. 70% of Indian houses use biomass fuel for cooking in poorly ventilated kitchens and with the cooking average of 2-3 hours a day, an average woman breathes 25 million liters of very polluted air (2).

Why worry?

COPD was considered to be the 6th leading cause of death worldwide in 2019 (3). According to a 2017 study of all the respiratory diseases, COPD contributed to 50% of all cases and 69% of years lived with disability (4). A recent metanalysis of Indian population showed prevalence of COPD in 7.4% of the population (5).

Challenges in diagnosis and treatment:

Women by far tend to neglect symptoms such as recurrent cough

and cold and mild shortness of breath on exertion, for years, before consulting a doctor. Moreover, the definitive diagnosis of COPD is made by performing a spirometry which is a majorly underutilized test with poorly trained technicians in most cases. Hence, the true extent of airway obstruction is missed in most cases. Once diagnosed, like other chronic diseases, compliance to long term treatment is poor, especially with inhaled therapy as theories of addiction and dependence on inhalers runs rife in the community.

Areas to consider:

COPD is commoner in women than usually believed and a core area highlighting inadequate gender specific disease occurrence data. Increasing trends in female smoking habits in urban India and biomass fuel usage in rural India compounded by ambient air pollution (indoor and outdoor) makes a woman even more susceptible to it.

Continued education and measures to prevent COPD must be encouraged. Once diagnosed, periodic monitoring and follow up to assess stability of disease, inhaler usage and vaccination against pneumococcal pneumonia and

influenza virus be ascertained alongside promoting pulmonary rehabilitation and lung health.

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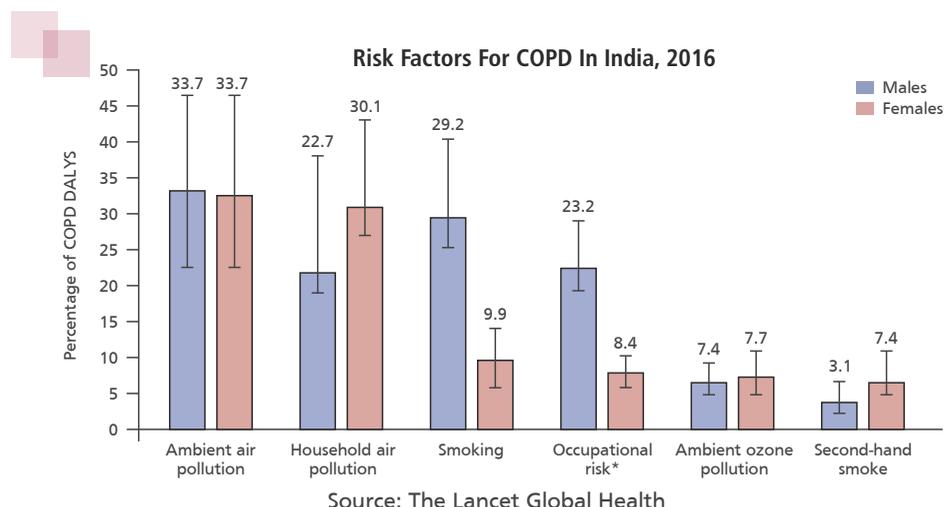


Figure 1

Vaginal Health Issues in Pregnancy



Dr Vimal Grover
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New Delhi

Vaginal infections are common during pregnancy because of hormonal changes which affect vaginal PH Balance. Moreover, secretions from vagina contain more glucose during pregnancy and therefore yeast infections are especially common in pregnancy.

The other common infections are bacterial vaginosis, trinomonal infection and Group B streptococcal infection GBS infections are more common in the white race.

Bacterial vaginosis causes a fishy smell. It can sometimes be self-limiting but sometimes can lead to move serious problems if untreated. So it is important to see your Oby's and Gynae & get proper treatment.

The signs and symptoms of all these infections is vaginal itching, discharge or odour sometimes feeling of swelling may be there especially with yeast infections.

Yeast infection can sometimes cause a burning sensation during intercourse or while passing urine may confuse a woman that she may be having UTI. The discharge is thick and has a cottage cheese appearance. But it could also watery

at times. vaginal pain, rash of soreness can be associated symptoms. So when you experience these issues in pregnancy it is better to seek medical attention.

Bacterial vaginosis incidence is about 20% of total pregnancies. Sometimes it is self-limiting but mostly requires treatment. If left untreated can cause preterm birth low birth weight babies. All these infections can easily be diagnosed with a simple high vaginal swab.

It usually requires treatment with metronidazole or clindamycin.

Group B streptococcal infections are more common in white race and if a patient test positive for GBS, it is essential to receive antibiotics during delivery otherwise baby gets infection. Group B streptococcal infection in babies can cause Fever, difficulty in feeding & lethargy.

Trichomonal infection is one of the most common & easily curable STD. it causes greenish yellow frothy foul smelling discharge. Itching, burning and irritation during intercourse are the usual symptoms.

Some tips to minimise vaginal infections during pregnancy

1. To Keep the Vaginal PH balance normal during pregnancy women should consume more probiotic to increase the self defence against vaginal infections. Indian yogurt dahi is the best probiotic that is very healthy for the gut for the proper digestion and is known to prevent vaginal infections.
2. No douching is allowed as it further makes situation worse.
3. When having sex during pregnancy it is a good idea to use condoms as that acts as a barrier against infections.

4. Use clean cotton thin underwear during pregnancy and change them at least twice a Day.
5. Keep the private area clean with normal water and also keeps it dry.
6. Quitting smoking and remaining destressed helps to maintain good immunity against infections.
7. Stay well hydrated
8. Drinking cranberry juice to keep the Vaginal PH acidic. These infections are not usually serious infections but are very disturbing, good thing is that they are simple to treat and are usually localised. Untreated yeast infections have the potential of infecting the baby mouth during delivery.
9. Avoid wearing tight clothes during pregnancy.
10. Better to sleep without underwear at night to reduce risk of infection.
11. Always wipe from front to back while cleaning your private area using bath oils for this area strict no.
12. Prolonged use of antibiotics can also induce yeast infection.
13. It is better to eat complex carbohydrates & whole grains instead refined sugar to keep diverse the environmental factors for infections.
14. Most important advice to prevent STD or vaginal infections is to stick to one partner and to use condom during sex.

Can IVF Prevent Thalassemia?



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Thalassemia is one of the five most common single gene disorder in Indian population. Approximately 10,000 babies are born annually with beta thalassemia major in spite of so much advancement in diagnostic modalities. Beta thalassemia is an autosomal recessive disorder that occurs due to beta globin gene mutation. If both husband and wife are carrier for beta thalassemia minor, there are 25% chances that child can be thalassemia major and that can be catastrophic for the family emotionally as well as financially.

There is a simple blood test which can diagnose if any of the partners is thalassemia carrier and if test turns out to be positive, the other partner is also tested for same. In case both partners turn positive for test, IVF and preimplantation genetic diagnosis comes in picture. To understand this in simple words, the male and female gametes are fused in IVF lab and after fertilisation are grown for five days to a stage called blastocyst. After blastocyst is formed, few cells are biopsied from it and are sent for genetic analysis. This is a highly

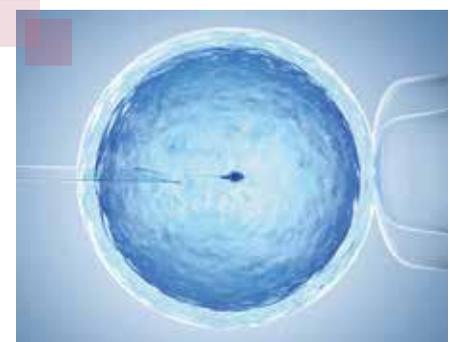
specialised technique, which needs a lot of expertise and optimum lab conditions. After biopsy, these embryos are frozen and once genetic report is received, normal embryos and diseased embryos are identified. Only normal embryos are implanted to have thalassemia major free child.

IVF and preimplantation genetic testing is in fact a boon for couple suffering from genetic disorders in the family. Although once a lady conceives, the prenatal testing through chorionic villus sampling or amniocentesis can also be done. But in case the child in womb turns out to be affected, couple has to undergo abortion which is psychologically very traumatic for the couple. On the other hand, preimplantation genetic diagnosis is an abortion free procedure and can pick up genetic disease in the embryos before they are implanted.

We have treated many cases of thalassemia, sickle cell disease, spinal muscular atrophy, neurofibromatosis, chromosomal disorders at Bloom IVF centre, Fortis LA Femme hospital.

Most of hereditary disorders including diseases like thalassemia, sickle cell anaemia can be diagnosed in childhood. It should be mandatory to detect hemoglobinopathy including carrier status if present, in childhood only. Also all children who are carriers for thalassemia when grow up as adults should have a counselling regarding choosing a non-carrier partner. Preventive strategies are very important as per disease burden analysis. In Vitro fertilisation followed by PGD (pre implantation genetic diagnosis) is the best option in current scenario to avoid birth of thalassemia major child.

So the answer to the question...Can IVF prevent thalassemia.....is definitely YES





Mental Health and Women



Dr Samir Parikh
Director, Mental Health
and Behavioral Sciences
Fortis National Mental Health Program
Fortis Healthcare

Mental health does not exist in vacuum. Instead, it is an interplay of biological, psychological and social vectors that have an impact on life. Gender is one such critical determinant

of mental health.

When we talk about the prevalence of mental health concerns, women have been found to be twice as likely as men to experience depression, generalized anxiety disorder and post-traumatic stress disorder. The prevalence of eating disorders amongst women is significantly higher than men. At the same time, women are less likely to reach a mental health service provider in case of an illness.

While certain biological elements at play impact the gender differences in the prevalence of mental health disorders, we also must be cognizant of the psychosocial challenges experienced by women and how these may impact mental health. Role conflicts in terms of managing personal and professional commitments, caregiving

responsibilities, pay inequalities, lack of representation in leadership positions, stereotypes regarding physical appearances and a higher risk of gender - based violence are some risk factors that may impact women's mental health negatively.

We must recognize that stereotypes and inequalities have a negative impact on us all. Rather than boxing people into categories, it's important that we challenge our assumptions, and instead recognize and value individual strengths and uniqueness.

Maintain realistic expectation from your own self. Take some time out to rest and rejuvenate. Most of all, break the self-stigma that surrounds mental health and reach out for support whenever required. Remember that in caring for others, it is also essential to care for the self.



Hidden Behind “The Good News”, Peripartum Depression



Dr Sukriti Sud
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What is Post-partum Depression?

“If the life is going to be like this, I don’t want to live anymore”, How many times have you heard this from a new mother?

Postpartum Depression (PPD) has now been redesignated as Peripartum Depression, or Major Depressive Disorder with peripartum onset. It is a subtype of depression during pregnancy or in the first weeks following delivery. However, women remain at risk for developing depression up to several months following delivery. The change from DSM-IV’s “postpartum depression” to DSM-5’s “peripartum onset” reflects evidence that 50% of postpartum depression episodes actually occur prior to delivery.¹

Peripartum depression may be life-threatening and have a significant negative impact on quality of life. Research by Robertson E, et al, states that 7%–13% of women experience a serious episode of postpartum depression (PPD)². In a recent report by WHO, 22% of women in India suffer from postpartum depression making capacity building in maternal healthcare as the need of the hour.

Post-partum depression may present as:

Staying sad for maximum part of the day, excessive crying, appetite alterations: either eating too much or too little, sleep pattern disturbance: sleeping too much or very little, self-withdrawal from family and friend, feeling disconnected from your own child, excessive fear of hurting self or the baby, fear of being a bad mother, feeling of guilt.

What could be the possible risk factors?

A meta-analysis conducted in India stated that risk factors for post-partum depression include economic challenges, women being victim of domestic violence, past history of mental illness, marital conflict, lack of support from the husband and delivering a female child (Ravi Prakash Upadhyay, et al, 2017)³. Pregnancy related anxiety, lesser social support, prior exposure to depressive disorders, stressful life events, and personality factor of neuroticism are some other risk factors leading to moderate to high post-partum depression

Screening being done in western countries

To identify women with perinatal depression, wide variety of screening instruments have been validated which include, the Edinburg Postnatal Depression Scale (EPDS), the postpartum depression screening scale, patients’ health questionnaire 9, beck depression inventory, beck depression inventory 2 4. Among these most widely used scale in clinical practices is the EPDS.

Need to start early screening in India

Perinatal depression affects the

mother-infant bonding and subsequently delayed child development and mental health disorders⁵⁻⁷. Children of postpartum depressive mothers have more cognitive, behavioural, and interpersonal issues than children of non-depressed mothers.³ Post-partum depression in mothers may lead to increased likelihood of discontinuing breastfeeding by the mother, temperamental issues, impaired attention and emotional regulations.

BUT...

Certain studies in India, highlight that post-partum depression is an unaddressed issue and there is an urgent requirement to identify and implement standard screening tests for early detection of depression in pregnant women. For this it is also vital to introduce a customised tool according to Indian population for accurate responses. Gynaecologists are the first point of contact for their patients and they can easily gather the information required during first trimester, third trimester and post-natal follow-ups.

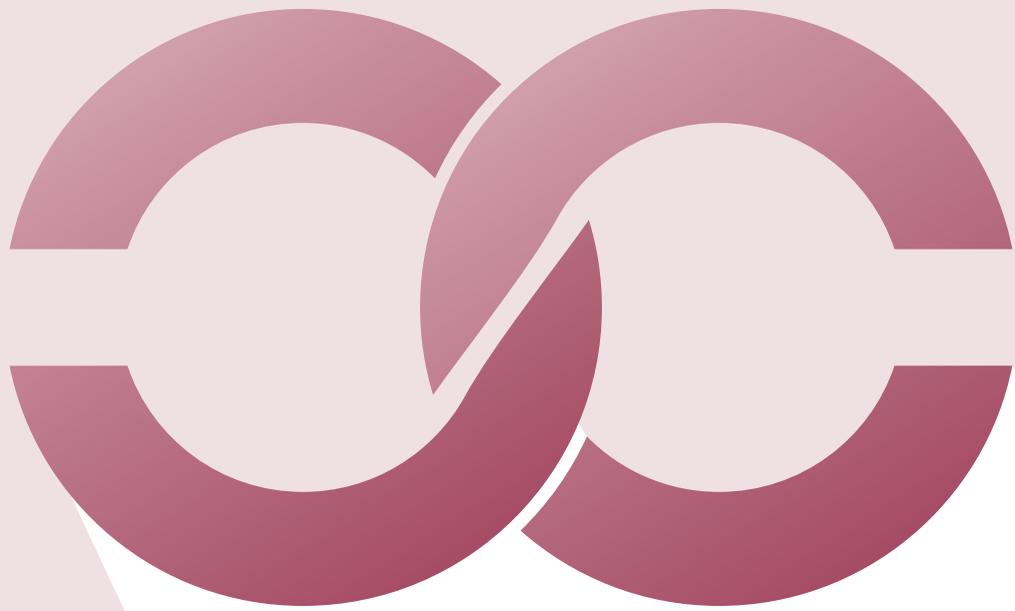
To support pregnant women transitioning into a new phase of life, an identified case manager at clinics/ departments can maintain a record and connect them with a counsellor. Another way is to form small communities including women with similar issues who can support each other with the guidance of a counsellor, psychiatrist or a therapist. This will facilitate sharing of experiences and enhance their mental health. Identifying mothers at high risk of PPD during the first trimester antenatal visits and ensuring constant support for them till the postpartum period can uproot this hidden disease from our society.



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CLINICAL CONVERSATIONS

Interesting Cases

Spontaneous Primary Umbilical Endometriosis Preceding Severe Pelvic Endometriosis: A Case Report



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Abstract

Primary spontaneous umbilical endometriosis accounts for a minority of the cases of umbilical endometriosis, the incidence of which is 0.5–1% of all extragenital endometriosis. Cyclical umbilical bleeding without any accompanying symptom of pelvic endometriosis or any prior history of surgery is an extremely rare condition that throws up diagnostic challenges, in the absence of overt clinical signs. We present a case of solitary primary umbilical endometriosis, which progressed to severe grade 4 endometriosis over a span of 4 years for poor patient compliance. Imaging difficulties as well as laparoscopic challenges in therapy, especially with the insertion of the primary port in the presence of an umbilical endometriotic nodule, are also discussed.

Keywords

Cutaneous sinus, Umbilical bleeding, Umbilical endometriosis, Umbilical nodule.

Journal of South Asian Federation of Obstetrics and Gynaecology (2021): 10.5005/jp-journals-10006-1965

Introduction

Endometriosis presenting primarily as cyclical umbilical bleeding without any accompanying symptom of pelvic endometriosis or any prior history of surgery is an extremely rare condition. It throws up diagnostic challenges, in the absence of overt clinical signs and unsuccessful imaging in small lesions, especially during the intermenstrual period. It accounts for a minority of the cases of umbilical endometriosis, the incidence of which is 0.5–1% of all extragenital endometriosis.¹ Treatment includes wide local excision of endometriotic nodule and treatment of accompanying pelvic disease if present. Laparoscopic challenges are encountered during the insertion of the primary umbilical port in the presence of an endometriotic nodule and in ensuring complete excision to prevent future recurrence.

Case Report

A 41-year-old lady with two spontaneous vaginal deliveries in the past presented with a sudden onset of cyclical umbilical bleeding during menstruation for 4 months. On physical examination, there was no visible umbilical nodule. Her menstrual cycles were regular and painless. She had no prior history of abdominal surgery. Her pelvic ultrasound was normal. Her menstrual cycles were suppressed with a 3-month course of medroxyprogesterone acetate. The induced amenorrhea simultaneously suppressed umbilical blood loss, clinically clinching the diagnosis of primary umbilical endometriosis.

However, she was noncompliant with medication and was lost to follow-up. She presented 4 years later with severe dysmenorrhea and painful irregular umbilical blood loss. A nodule was now palpable at the base of the umbilicus during menstruation. A transvaginal ultrasound done again revealed severe pelvic endometriosis evidenced by bilateral chocolate cysts measuring approximately 5 cm each. Magnetic resonance imaging (MRI) of the umbilicus revealed a diffuse restricted nodular lesion of 1.2 cm at the base of the umbilicus, although an ultrasound between menstrual cycles failed to pick up the small lesion.

At surgery, a deep nodule with a cutaneous sinus was found at the base of the umbilicus. She was treated with wide excision of the umbilical nodule using monopolar diathermy, with a 1 cm margin of dissection. The dissection was carried up to the rectus sheath and peritoneum. Concomitant laparoscopy was performed through an umbilical port introduced at the lower end of the umbilicus, after dissecting the endometriotic nodule off the underlying rectus sheath. Port entry was done prior to complete excision of the nodule. A total laparoscopic hysterectomy with bilateral salpingo-oophorectomy was performed for grade 4 endometriosis with dissection of rectal adhesions in the pouch of Douglas. Complete excision of the umbilical endometriotic nodule (Figure 1) was done under laparoscopic guidance to exclude peritoneal extension of the lesion. The rectus sheath at umbilicus was repaired with continuous Vicryl suture. Reconstruction of umbilicus was performed. Histopathological examination confirmed umbilical endometriosis (Figure 2).

Discussion

Secondary endometriosis of the umbilical port site (scar endometriosis) following laparoscopic treatment of endometriotic disease is more common than spontaneous primary endometriosis of the umbilicus. Our case of spontaneous umbilical endometriosis can be considered as a scar endometriosis in a physiological scar² or metaplasia from the remnants of the urachus.³ The typical presentation of umbilical endometriosis is that of a painful umbilical nodule that bleeds simultaneously during menstruation. Diagnosis can be difficult in the absence of a visible or palpable umbilical nodule and a negative ultrasound in small lesions but can be made from a suggestive history, a trial of suppressive medical therapy and MRI if available. Medical therapy with GnRH analogs, progesterone, and the oral contraceptive pill can be used for temporary disease suppression but is not curative. The definitive treatment is excision of the nodule with a wide margin to minimize recurrence.⁴ If needed, an umbilectomy should be discussed preoperatively. Excision should be carried down to the rectus sheath to avoid residual disease. Spontaneous primary umbilical endometriosis can also progress to involve pelvis. As in our case, an accompanying laparoscopy was used to treat the coexistent pelvic endometriosis.

Conclusion

Our case highlights diagnostic difficulty in evaluation of early spontaneous primary umbilical endometriosis, and we explain how a careful history with a simple trial of medical therapy can be helpful. The second point of importance is the description of the technique of wide excision and how a simultaneous laparoscopy following dissection of

the endometriotic nodule off the rectus sheath is used to exclude peritoneal extension of the umbilical nodule, to guide complete excision, and to prevent recurrence.

Content For Publication

Written informed consent was taken from patient for publication of the case and accompanying images.

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Figure 1



Figure 2

Impending Rupture of Gravid Rudimentary Horn: A Case Report



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Abstract

Pregnancy in non-communicating rudimentary horn is very rare and life threatening. It is often not diagnosed unless it terminates by rupture in the 2nd trimester. Catastrophic hemorrhage results in grave consequences for mother & fetus. To date, management of such cases remains a challenge due to diagnostic dilemma. Pre rupture diagnosis of rudimentary horn pregnancy with USG is technically difficult with sensitivity of 30%. Here we present a case of unruptured non communicating rudimentary horn pregnancy at 22week gestation presenting in our Gynae Department as a case of abdominal pregnancy. Laparotomy was carried out and excision of gravid rudimentary horn was done.

Key words: Rudimentary horn, Abdominal pregnancy, Uterine rupture, Uterine anomalies

Introduction

Uterine anomalies result from failure of complete fusion of the mullerian ducts during embryogenesis. The incidence in the general population is estimated to be 4.3%¹. A unicornuate

uterus with rudimentary horn is the rarest anomaly and results from the failure of one of the mullerian ducts to develop completely and its incomplete fusion with the contralateral side.

The incidence of this anomaly is approximately 0.1%². In majority of cases (83%), the rudimentary horn is non communicating³. Presence of uterine anomaly may increase risk of preterm birth, breech presentation, placenta praevia, IUGR and ectopic pregnancy⁴. The anatomical variation of a rudimentary horn serves as the basis for the classification of a unicornuate uterus by the American Society of Reproductive Medicine (ASRM). The presented case belongs to class 11B according to ASRM⁵.

Case Report

A 22 years old primigravida presented at 22 weeks of gestation at Fortis Escorts hospital Jaipur, with 5-month amenorrhea, pain abdomen and ultrasound diagnosis of abdominal pregnancy. She had normal menstrual

history without dysmenorrhea. There was no history of vaginal bleeding, vomiting or any syncopal attack. There was no significant past medical, surgical and personal history.

At admission, the patient's general condition was good and her vital parameters were normal. A physical examination of abdomen revealed a relaxed non tender uterus palpable up to the level of umbilicus. Fetal heart was audible with Doppler. Previous 2 scans at 8th & 14th weeks of pregnancy showed intrauterine fetus, while USG at 22 weeks showed an empty uterine cavity and abdominal pregnancy with 21-22 weeks live fetus. Decision was made to confirm the diagnosis with MRI abdomen. On MRI, pregnancy in rudimentary horn of uterus was suspected with a differential diagnosis of an abdominal pregnancy or pregnancy in one horn of a bicornuate uterus. After complete hematologic and anesthetic workup patient underwent diagnostic laparoscopy to confirm the diagnosis and to rule out

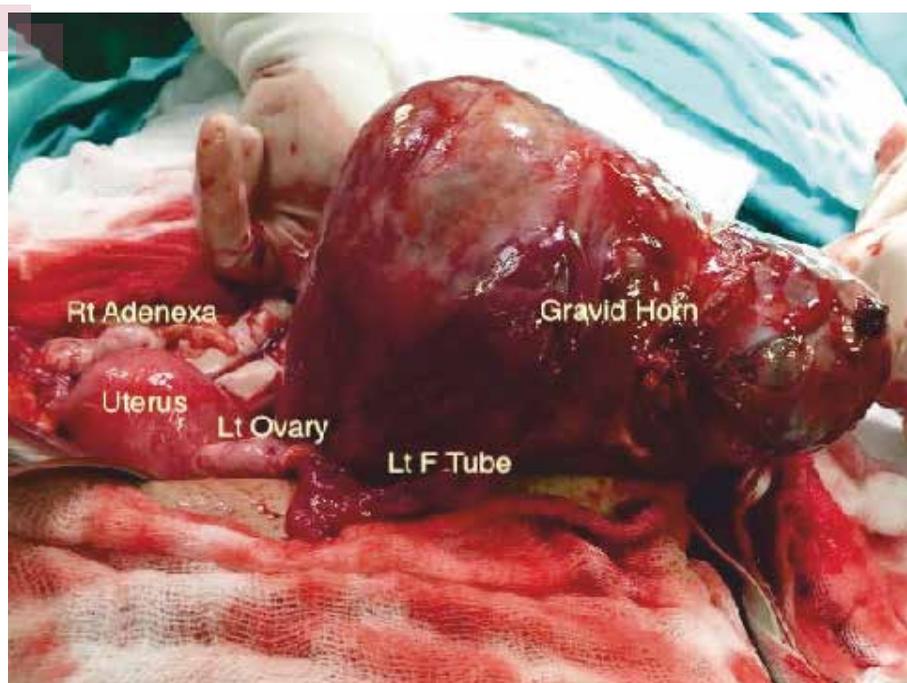


Figure 1

extra uterine placentation which may require multispecialty intervention.

On diagnostic laparoscopy, there were approximately 200cc blood clots in peritoneal cavity. Omentum was adherent to uterus, obscuring view of pelvis. Omentum was mobilised after adhesiolysis. Right horn of uterus was normal in shape, size and surface. Right adnexa was also normal. Left uterine horn was enlarged to 22 – 24 weeks pregnancy with surface oozing blood. Left fallopian tube and ovary were seen attached to left horn of uterus. Left gravid uterine horn was noncommunicating and attached to body of uterus with fibrotic band. A diagnosis of impending rupture of left rudimentary horn pregnancy was made and decision for laparotomy taken. The gravid horn was then excised along with left fallopian tube. The post-operative period was uneventful and patient was discharged on 4th day. A histopathologic examination of excised uterine horn confirmed the diagnosis, it showed chorionic villi attached to myometrium but not invading it. Urinary tract malformations were ruled out by USG and IV urography done at 8 weeks follow up. At 1 year follow up, patient is again pregnant with 22 weeks' gravid uterus and uneventful ANC.

Discussion

The reported incidence of rudimentary horn pregnancy is 1 in 100000 to 140000 pregnancies. Pregnancy in a non-communicating rudimentary horn occurs through trans peritoneal migration of sperm cells or a fertilized ovum³. This theory was supported in our case by observation of corpus luteum in the contralateral ovary. It is extremely uncommon for such cases to result in a viable baby. These cases usually result in rupture of horn in the second trimester. Timing of rupture varies from 5th to 35th week of gestation.^{6,7}

Only 10% cases reach term⁸, and the fetal salvage rate is only 2%⁹. The rupture occurs because of the underdevelopment of the myometrium and a dysfunctional endometrium⁹. A rudimentary horn pregnancy can be further complicated by placenta percreta due to the poorly developed uterine musculature and the small size of the horn, the reported incidence is 11.9%⁶.

The key for diagnosis of gravid rudimentary uterine horn prior to the rupture, is a high index of clinical suspicion. A history of severe dysmenorrhea may be a clue to diagnosis. However rudimentary horn may be underdeveloped and its endometrium non-functional, so dysmenorrhea may be absent. A careful pelvic examination in the 1st trimester, showing a deviated uterus with a palpable adnexal mass should provoke suspicion of a mullerian anomaly. Ultrasound, MRI and laparoscopy are diagnostic tools. HSG and hysteroscopy may aid diagnosis pre conception. Tsafir et al. suggested the following criteria for USG diagnosis of rudimentary horn pregnancy: (1) a pseudo pattern of asymmetrical bicornuate uterus; (2) absent visual continuity between the cervical canal and the lumen of the pregnant horn, and (3) the presence of myometrial tissue surrounding the gestational sac.¹¹. Sensitivity of ultrasound is only 26% and it decreases as the pregnancy advances. 38% of patients have coexisting renal abnormalities. Tubal pregnancy, cornual pregnancy, Intrauterine pregnancy and abdominal pregnancy are all common sonographic misdiagnosis and may often lead to the implementation of inappropriate treatment modalities. Unsuccessful attempts at terminating a pregnancy in a rudimentary horn by D & E or administering misoprostol have been reported in literature.¹². In this case despite the patient's earlier

ultrasound, the diagnosis was initially missed probably due to the mimicking of rudimentary horn musculature to normal uterine wall and a lack of clinical suspicion. It was only when the patient had ultrasound at 22 weeks that extra uterine pregnancy was suspected. MRI was helpful in making the diagnosis of a uterine malformation, although the exact diagnosis and type of placentation could be established only by visualizing at laparoscopy.

Immediate surgery is recommended whenever a diagnosis of rudimentary horn pregnancy is made. The traditional treatment is laparotomy and the surgical removal of the pregnant horn to prevent rupture and recurrence. In recent years, several cases with early gestation have been treated successfully by laparoscopy using various techniques¹³ like systemic methotrexate administration or foeticide with intracardiac KCl, as alternatives or adjuncts to surgery¹⁴. Conservative management until viability has been advocated in selected cases diagnosed at advanced gestation. Emergency surgery may have to be performed at any time in all such cases. There have been reports on a few cases of rudimentary horn pregnancies progressing to the third trimester and resulting in live birth following caesarean delivery.

Conclusion

Despite advances in ultrasound and other diagnostic modalities, prenatal diagnosis remains elusive, with confirmatory diagnosis made at laparotomy. The diagnosis can be missed in ultrasound especially in inexperienced hands.

Precious time may be lost due to delay in diagnosis or misdiagnosis and the general condition of the patient may worsen. Timely resuscitation, surgery, and blood transfusion are needed to save the patient.

There is a need for an increased awareness of this condition especially in developing countries where the possibility of detection of uterine malformation before pregnancy or rudimentary horn pregnancy before the rupture is unlikely, and precious time is lost in shifting these women to the referral hospital.

Proper diagnostic methods and early referral of patients to tertiary hospital will reduce the morbidity and mortality.

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A Rare Case of PPIUCD with Uterine Perforation with Subacute Intestinal Obstruction



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Abstract

Intrauterine copper containing device is safe and effective method of contraception, popular among female. With the pros comes the cons, yes it can be double edged sword as uterine perforation can be life threatening. An intra-uterine device that perforates the uterus could lead to peritonitis, adhesions, obstruction or may perforate the bowel. An IUCD perforation though rare, is seen commonly during post-partum period. Any patient in post-partum period after caesarean may present with paralytic ileus or other signs and symptoms of bowel obstruction. A symptomatic patient with missing thread should be managed actively and any suspicion should lead one to prompt intervention. If possible with advances in endoscopy, patient can be taken for laparoscopy. It would avoid stress of next major operative procedure.

Introduction

In recent years there has been resurgence of interest in post-partum intra uterine contraceptive device.

IUCD has been safe and an effective reliable long term contraceptive method. Though uterine perforation is rare complication of post-partum IUCD but could pose to be a serious problem with an incidence of less than 1 case per 1000. It could be a cause of severe morbidity.

Case description

Mrs. XYZ, 26 years age, P2L2 presented in emergency department with complaints of vomiting, fever, inability to pass flatus for 10 days. Patient was been evaluated for same complaints at other facility outside. She had caesarean delivery on 6th of March 2022 at some other facility. Her antenatal period was uneventful. Post-delivery she was discharged on day 3. She had a previous caesarean delivery 3 years back which was uncomplicated. On 28th March 2022 patient had complain of vomiting and fever followed by abdominal distension, for which patient was admitted at outside facility. Patient was managed conservatively at the facility where she had LSCS. Ryle's tube was inserted. She was not allowed orally, given IV fluids, IV 3rd generation cephalosporin antibiotics and IV metronidazole. Ultrasonography revealed loculated collection in abdomen. Further CT Abdomen revealed loculated collection with moderate dilatation of bowel loops. Diagnosis of postoperative peritonitis was made. Patient improved initially with deterioration of condition 3 days later.

On 4th April patient came to emergency at Fortis Escorts Faridabad and was shifted to ICU. Patient had severe vomiting unable to tolerate any fluid, unable to pass flatus, abdominal distension with palpable mass in right para umbilical region.

On examination pulse rate of the patient was 89 beats per minute, blood pressure measured in right arm sitting position was recorded to be 90/58 mm Hg. The patient was oriented to time, place and person. On examination, abdomen was distended. There was diffuse tenderness, guarding and rigidity suggestive of peritonitis. There was no gas under the domes of diaphragm in both the plain radiograph of chest and erect x-ray of abdomen.

Decision of exploratory laparoscopy was made and surgeon was called for same after stabilizing the patient.

Per Operatively

Dense adhesions were present between bowel loops and omentum and anterior abdominal wall which was slowly released. (Figure 1) A band was seen compressing small intestine and was released. Intestine was pushed away to reach uterus. Uterine scar dehiscence was present at centre and was friable. Copper T thread was seen popping out of it. (Figure 2) Localized collection was present anterior to the surface of uterus and pouch of Douglas. (Figure 3)

Pus was drained and sent for pus culture and suspected for Koch's abdomen due to matted bowel loops. Patient was kept on IV fluids for 48 hours. Ryles tube was inserted. Intra-abdominal drain was kept. Closure done. (Fig 4) Patient was kept in ICU and was shifted toward after 24 hours. Patient was given clear fluids orally after 48 hours which was tolerated well by her. Gut motility was resumed. She was given liquid diet which was well tolerated. She was able to pass flatus and motion. Patient was relieved of complaints and was discharged on day 4th.

Aerobic culture and sensitivity report showed *Staphylococcus aureus*, sensitive to Linezolid and was negative for acid fast bacilli.

Discussion

Postpartum IUCD insertion is relatively safe and associated with low incidence of complications like infection, bleeding issues, and also negligible perforation ratio. However, expulsion rate was more when compared with delayed postpartum insertion. Post placental insertion during caesarean were having lower expulsion rates than insertion after normal delivery. Our case was a symptomatic case of perforated IUCD through a dehisced scar of uterus with puerperal sepsis with sub-acute intestinal obstruction. This case report conveys the importance of using proper technique during post-partum IUCD in situ. Also here lies the importance of sterile operation theatre and proper hand washing while scrubbing to maintain aseptic conditions. Further need to report such complication generate accurate information and awareness among the service providers for post-partum insertion of IUCD.



Figure 1: Dense Adhesions Between Bowel Loops



Figure 2: IUCD Thread Seen Through Dehisced Scar



Figure 3 : Pus Collection in Abdomen

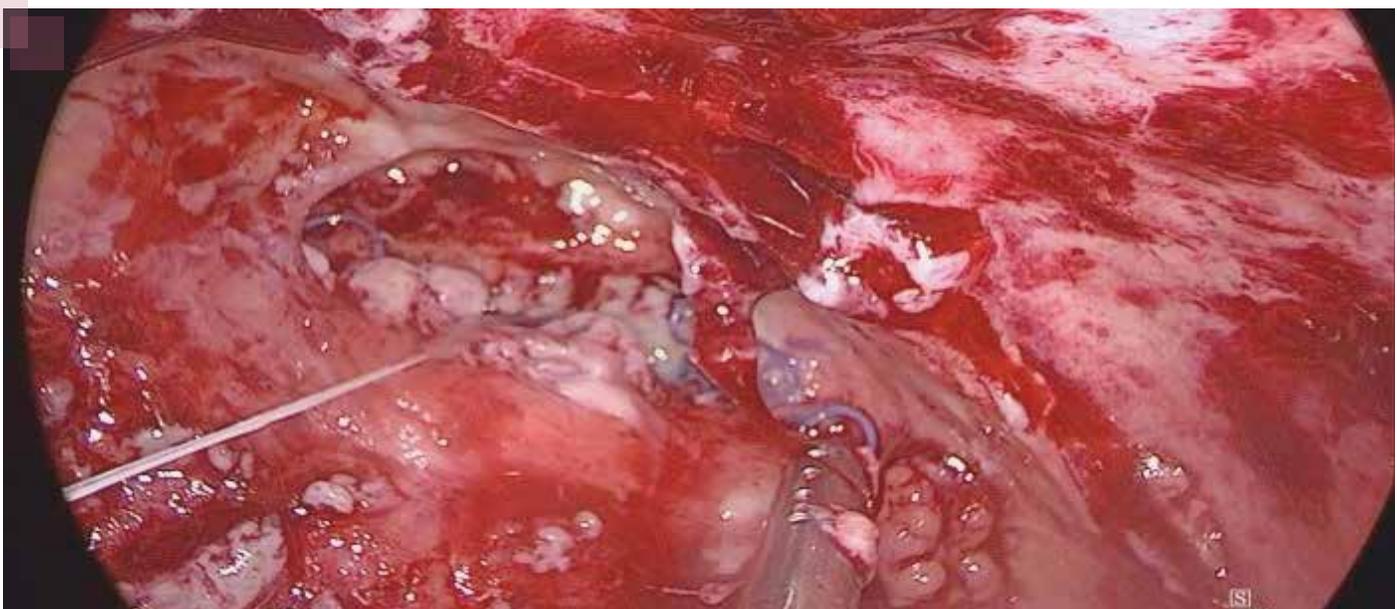


Figure 4: Removal of IUCD

A Case of Mistaken Identity!



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Background

Vaginal cysts are found in approximately 1 to 2 % of women. Gartner's duct cysts are on the anterolateral vaginal wall and reported incidence is 0.1 to 0.2 %. As it may arise from remnants of Wolffian duct, it may even appear in late middle age. Vaginal cyst can be histologically classified as epithelial, inclusion, mullerian, mesonephric, and urothelial in addition to other rare types. These present with symptoms of visible palpable mass, dyspareunia, voiding disturbances, vaginal discharge, and pain.

Vaginal leiomyomas are rare benign tumours with only about 300 reported cases in medical literature. These tumours usually arise from the anterior vaginal wall and, depending on the size and site, may cause varied clinical presentations such as dyspareunia, pain, or dysuria. Vaginal leiomyomas sometimes occur concurrently with leiomyomas elsewhere in the body. The clinical diagnosis of vaginal leiomyoma requires a high index of suspicion because the tumour could easily be mistaken for a cystocele, urethrocele, Skene duct abscess, Gartner duct

cysts, urethral diverticulum, vaginal cysts, Bartholin gland cysts, or vaginal malignancy. The diagnosis is usually confirmed by histopathology.

Case Presentation

A 32-year-old P2002 married woman came to the gynaecology opd complaining of a mass protruding from the vagina for 3 months. She had no complaints of dysuria, dyspareunia or associated offensive foul-smelling vaginal discharge. On physical examination, she looked well; her blood pressure was 130/80 mmHg, pulse 84 beats/min. and temperature of 37.4°C. She had a non-tender tumour that was rubbery in consistency and located below the urethral region more towards the left side (Image 1).

Furthermore, haemoglobin level was 11.7 g/dL, aspartate aminotransferase (AST) 17 IU/L (normal value < 35 IU/L), alanine aminotransferase (ALT); 18 IU/L (normal value < 49 IU/L), and creatinine level 0.64 mg/L (normal value; 0.55-1.02 mg/L). Her viral markers were negative and cervical screening was negative for intraepithelial lesion or malignancy. Her HPV DNA was negative. In view of proximity to bladder on clinical examination, a contrast enhanced Magnetic resonance imaging (MRI) of the pelvis was advised (Image 2).

As per the MRI report, a unilocular cystic lesion arising from the anterolateral aspect of superior vagina appearing hyperintense on T2 and hypointense on T1 was noted. Size was 9.8 x 27 x 20 mm causing mass effect on vaginal wall. The mass was noted to be free from bladder wall pushing the urethra anteriorly situated above the level of symphysis pubis. Rest of the pelvis scan was normal. A provisional diagnosis of

Gartner's duct cyst was given. The patient was counselled and taken up for surgery. Foleys catheter was introduced in view of close proximity of the mass to the urethra. Incision was made over the mass and gently excised through the vaginal route by sharp and blunt dissection. A whorled whitish lobular vaginal mass was excised measuring approximately 5x4x3 cm (Image 3).

Vaginal closure was in two layers and blood loss was minimal. Check cystoscopy was done at the end of the procedure to confirm bladder wall integrity. Patient was discharged in the same day. Post-operative histopathology confirmed benign spindle cell neoplasm with histomorphology suggestive of leiomyoma.

Discussion

Leiomyomas are benign tumours of the female genital tract. These tumours are common in the uterus and to some extent, in the cervix, the round ligament, uterosacral ligament, ovary, and inguinal canal, respectively. Leiomyomas of the vagina are rare and there are hardly 300 reported cases in the medical literature. Vaginal leiomyomas are common in women between 35 to 50 years and more common among Caucasian women. These tumours usually occur as a single, well-circumscribed mass arising from the midline anterior wall, and less commonly from the anterior and lateral walls. In our case, the tumour arose from the anterior vaginal wall. Vaginal tumours are usually asymptomatic but may occasionally present symptoms be ranging from lower abdominal pain, low back pain, vaginal bleeding, dyspareunia, urinary symptoms like frequency, dysuria or other features of vagina or urinary obstruction.

Preoperative imaging and careful examination may help rule out a malignancy. In MRI, the tumour appears as a well-demarcated solid mass of low signal intensity in T1 and T2 weighted images with homogenous contrast enhancement while leiomyosarcomas and other vaginal malignancies show characteristic high T2 signal intensity with irregular and heterogeneous areas of necrosis or haemorrhage. In our case, the MRI gave a mistaken possibility of Gartner's duct cyst. MRI is accurate in diagnosing a leiomyoma with a sensitivity of 88–93% and a specificity of 66–91%. There is an estimated 2 to 5% error margin in radiological examinations in the medical literature and this may increase to 40% in emergencies. Surgical excision through the vaginal route has been the traditional approach for vaginal tumours but the abdominoperineal route may be necessary for huge tumours. If vaginal leiomyoma is diagnosed before surgery, gonadotropin-releasing hormone analogues (GnRH-a) or selective progesterone receptor modulators (SPRM) to reduce tumour size or preoperative embolization to reduce intraoperative blood loss may be used. Furthermore, there are reports of changes in sexuality and intimacy among patients after diagnosis and treatment of vaginal tumours which may need psychological counselling.

Conclusion

Vaginal leiomyomas are a rare occurrence. The diagnosis is based on careful examination and preoperative imaging (ultrasonography and MRI). However, definitive diagnosis is usually made intra-operatively with histopathological confirmation being the gold standard of diagnosis and also beneficial to rule out any possible focus of malignancy. Surgical removal of the tumour through vaginal approach, preferably with urethral

catheterization to protect the urethra during surgery, is usually the treatment of choice. In case of large tumours, however, an abdominoperineal approach is preferred. The patient needs to be followed up for chance of recurrence. Our patient was operated 2 weeks ago and is currently on follow up.

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Acknowledgements

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Figure 1



Figure 2



Figure 3

Premature Closure of Ductus Arteriosus Due to Third Trimester NSAID Exposure – A Case Report



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Abstract

Premature closure of the ductus arteriosus (DA) leads to right ventricular overload, tricuspid regurgitation, pulmonary hypertension, and consequent right heart failure in the foetus. It is a rare but potentially serious complication in pregnancy, which can lead to foetal/neonatal death or long-term neonatal sequelae, if not treated promptly. Non-steroidal anti-inflammatory drug (NSAID) exposure in the third trimester is most commonly associated with this condition, though idiopathic cases have been reported. We present a case of prenatal closure of ductus arteriosus in a primigravid patient at 33.3 weeks' gestation after a single injection of diclofenac, administered to her for backache. Timely detection and delivery in a tertiary care centre resulted in an excellent neonatal outcome.

Introduction

The DA connects the pulmonary artery to the aortic arch, diverting flow from the high resistance pulmonary circulation to the low resistance aorta. After birth, at term, the DA closes within 72 hours of age. Premature closure of the DA in utero is a rare event which usually occurs after 31 weeks of gestation and is attributed to the increased sensitivity of the DA to constricting agents like NSAIDs, which are used commonly for pain management.

Case Summary

A 27-year-old primigravid patient at 33.3 weeks' gestation was given a 75mg intramuscular diclofenac injection for severe back pain at a local clinic two days prior to admission. Her pregnancy had been uneventful so far with no history of any other drug intake.

She perceived persistently decreased foetal movements 2 days after administration of the injection. Her non-stress test was non-reassuring. An urgent ultrasound was done which revealed normal biometry but a biophysical score of 4/10 (no foetal movements for 90 minutes, no breathing movements, AFI -nil). There was a hypertrophic right ventricle (RV), mild tricuspid regurgitation, increased resistance in Ductus venosus flow and ascites, suggestive

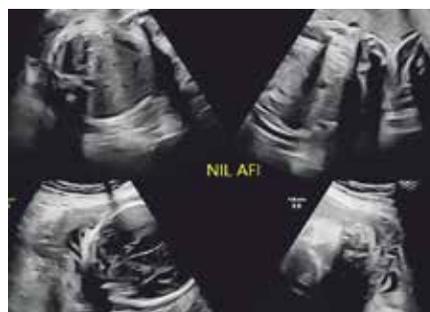


Figure 1a



Figure 1b

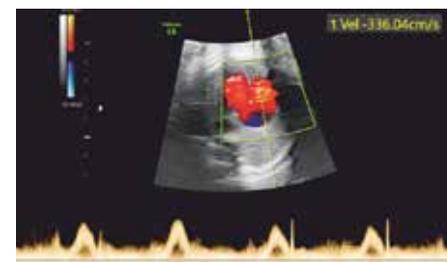


Figure 1c

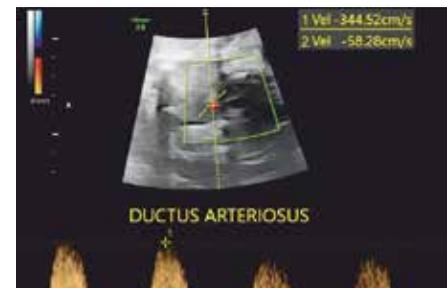


Figure 1d

of right ventricular fetal heart strain and increased pressure in fetal venous circulation indicating premature closure of DA, as seen below (Figure 1). She was transferred to our hospital for further management and tertiary neonatal care. Her NST on admission showed a normal baseline with reduced variability and no accelerations or decelerations. After a case discussion with the neonatology team and paediatric cardiologist, the patient was counselled about the high chances of heart failure in the foetus and intrauterine demise. Emergency caesarean section was performed and a male baby weighing 1.8 kg was delivered. APGAR score was 6 and 7 after 1 minute and 5 minutes respectively.

The baby developed tachypnea and grunting soon after birth and was shifted to the NICU. CPAP support was needed from day 1 to day 6. On day 10, 2-D echo was done which showed 4 mm ostium secundum, ASD with a left to right shunt over the foramen ovale. The baby was discharged on day 21 and is doing well.

Discussion

In utero ductus, closure can lead to a wide variety of clinical situations in the new-born ranging from mild reversible respiratory distress to death. Literature available is scant with only anecdotal case reports. This is a rare phenomenon which is mostly subclinical and not diagnosed. It has an excellent neonatal prognosis if delivery is timely with consequential decrease in foetal pulmonary vascular resistance. To understand the pathophysiology of this event, it is important to revisit the normal foetal circulation, as seen below (Figure 2).

Neonatal changes in DA

The DA has predominantly muscular media (increases with period of gestation) with circumferential fibers and a well-defined internal elastic lamina. Towards term, endothelial cushions develop which are involved in postnatal closure. In the third

trimester, usually after 31 weeks, the DA becomes more sensitive to constricting factors such as PG synthetase inhibitors (Figure 3).¹

Ultrasound diagnosis⁶

1. Altered DA flow velocities. (adapted from Genovese et al²)

| Intrauterine ductus arteriosus restriction: parameters for the diagnosis at >27weeks | |
|--|-------------------------|
| Peak systolic velocity | >1.4 m/s |
| Diastolic peak flow velocity | <0.35 m/s |
| Pulsatility index | <1.9 (n.r. 2.46 ± 0.52) |

2. Dilated pulmonary trunk.
3. Right ventricular hypertrophy.
4. Reversal of DV flow.

In our case, the foetus presented with all signs of RV overload and right heart failure.

Management

In most reported cases, evidence of DA constriction disappeared within 24 to 48 hours after discontinuation of the causative agent.⁷ Management would depend on the period of gestation and signs of right ventricular

overload on foetal echocardiography.²

1. No signs of right ventricular overload at any gestation - foetal echocardiography should be repeated weekly. In case of any deterioration and signs of right ventricular overload, timely delivery should be considered by caesarean section. Antenatal corticosteroids should be given prior to delivery, whenever indicated.
2. In case of evidence of right ventricular overload, management would depend on the period of gestation:
 - a) Pregnancy < 32 weeks - administer antenatal corticosteroids and repeat foetal echocardiography every 2 days. If it shows unchanged parameters, the foetus can be monitored for up to 32 weeks. In case of worsening conditions (increased ductal gradient, tricuspid regurgitation or right heart dilatation), prompt delivery by caesarean section is indicated.
 - b) Pregnancy > 32 weeks - administer antenatal corticosteroids and repeat foetal echocardiography after 3 days. If conditions remain unchanged or become worse, prompt caesarean delivery is indicated.

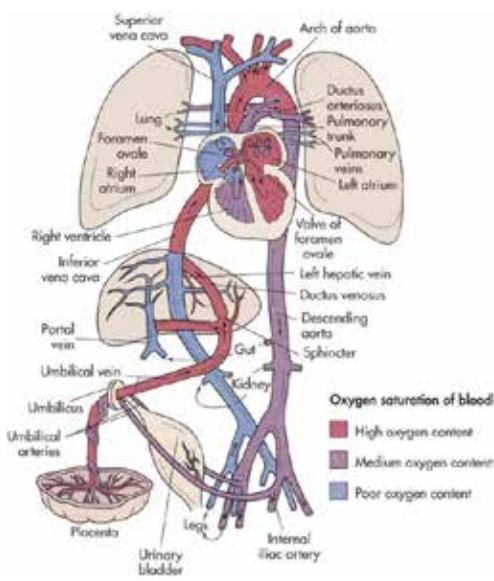


Figure 2

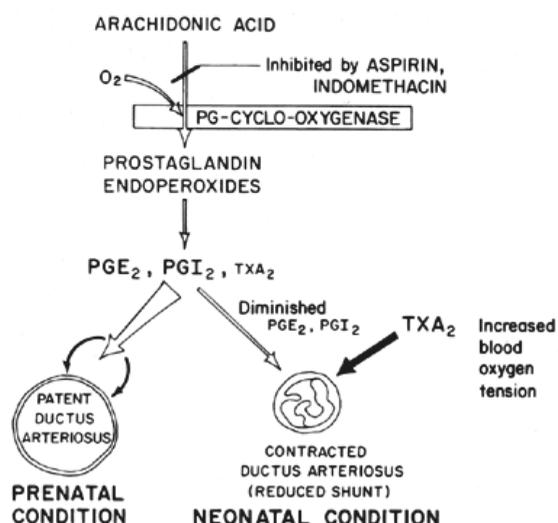


Figure 3

In our case, we did not wait for administration of antenatal corticosteroids due to the opinion of the paediatric cardiology and neonatology teams, who felt that in utero risks to the foetus were more than those of preterm delivery and prompt delivery was indicated in this case.

Prognostic Factors

Most foetuses with ductal occlusion have redistribution of flow through the foramen ovale and do not develop hydrops, with resolution of DA constriction after withdrawing the inciting agent. If only tricuspid regurgitation, increased pulmonary resistance and RV hypertrophy are seen, recovery is usually prompt. In case of abnormal umbilical venous pulsations, RV dysfunction can persist for 2-6 months, and the prognosis is usually poor with persistent pulmonary hypertension.

Review of Literature

Few reports of anecdotal cases have been found in literature. Karoline Aker et al⁸ described a primigravida woman at 36 weeks gestation, who had consumed six doses of diclofenac over 2 days and presented with all features of DA constriction and RV dilatation. Immediate caesarean section resulted in good neonatal outcome. M. Auer et al⁹ reported a similar case of ingestion of diclofenac 50 mg twice daily for 10 days. She presented with decreased foetal movements and features of DA constriction and RV overload. W. Krzewoski et al¹⁰ presented 3 cases of prenatal DA closure after maternal ingestion of benzydamine 3 mg lozenges, which are freely available over the counter.

Few reports of this complication have also been seen in pregnancies and no association with medication has been found. Genovese et al² in their analysis of 18 patients (8 studies/case

reports) over 10 years found no association with medication in 11 patients. Neonatal death was reported in 4 patients.

Mark Gewellig et al¹¹ presented a retrospective study from 1998 – 2007 of 602 foetuses and 1477 neonates in whom echocardiography had been done. 8 antenatal and 4 neonatal cases with features of premature ductal closure were identified of which 3 antenatal cases had a history of NSAID ingestion while 1 postnatal case had a disulfiram implant. 25 per cent mortality (3 neonates), due to severe respiratory insufficiency, was reported in this study.

Conclusion

Prenatal closure of the ductus arteriosus is a rare but potentially serious complication in the foetus. Timely detection and delivery of the neonate in a tertiary care setting has an excellent neonatal outcome. Delay in delivery can result in severe hemodynamic compromise, affecting the survival and long term wellbeing of the neonate. It is important to emphasize the importance of cautious pain management in pregnancy, especially in the third trimester, for which NSAIDs are usually administered.

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Robotic-assisted Sacrocolpopexy - A Case Series



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Type of Study

Retrospective study

Tagline

Gold standard minimally invasive approach for apical vault prolapse

Key Words

Robotic, Sacrocolpopexy, minimally invasive

Abstract

Aims and Objectives: To analyze operative time, post-operative pain score, ICU stay, and duration of hospital stay of patients undergoing Robotic Assisted Sacrocolpopexy.

Results

The average age of the patients was 68 years (65-81 years). The vault prolapses ranged from stage 2 to 4 with commonest being stage 2. The mean operating time ranged from 2-4 hours with a mean of three hours including robotic docking. There was

minimal intraoperative blood loss of less than 200 ml in all patients. The average post-operative pain score was 2 (range of 1-3) on day 0. All patients were discharged on post-operative day two. At six weeks follow up, they were all comfortable with two patients reporting occasional constipation.

Discussion: In our case series, the operating time significantly shortened after the initial six cases, thus highlighting the shorter learning curve of robotic surgery as opposed to laparoscopic surgery. The intraoperative blood loss was very minimal with minimum postoperative pain and short postoperative stay. The drawbacks of robotic surgery remain the cost and length of surgery which are expected to both reduce in the near future, with the advent of newer robotic systems, greater awareness of robotic surgery and acceptance by insurance agencies, surgeons and patients alike.

Conclusion

Robotic assisted Sacrocolpopexy is an ideal minimally invasive approach to correct apical vault prolapse. With more precise standardization and training of the entire team of surgeons and support staff, operating time and complications can be greatly reduced. This will enable us to deliver the best available care worldwide to patients in the Indian subcontinent.

Introduction

Pelvic floor disorders such as pelvic organ prolapse (POP), urinary and fecal incontinence affect more than 21% of women in India (1). The prevalence is increasing by age, and more than 10% of women in the US undergo surgical treatment for these at least once in their lifetime (2,3). The statistics for the same are not yet available in India. First described in 1962 by Lane, open abdominal Sacrocolpopexy involves the

suspension of the vagina to the sacral promontory with a graft (4). It is a safe and effective procedure that has been accepted as the gold standard for repairing apical vault prolapse. The advent of minimally invasive surgery and specifically robotically assisted approach has led to improved visibility, shorter surgical time, and hospital stay (5). In our retrospective case series over the period of one year, we attempt to analyze the operative time, post-operative pain score, ICU stay, and duration of hospital stay.

Materials and Methods

Retrospective data of 12 patients who underwent Robotic Assisted Sacrocolpopexy between April 2021 and April 2022 was analyzed. The average age of the patient, the stage of the prolapse, the operative time, intraoperative and post-operative complications, ICU stay, the postoperative pain score and duration of hospital stay were analyzed.

Preoperative Evaluation

All the 12 patients in the series were post hysterectomy; they underwent the procedure for benign gynecological issues. They were evaluated with a thorough history and detailed physical examination with staging of the prolapse by POP-Q classification. The presence of comorbidities was noted, and a pre anesthetic evaluation was performed. Informed consent was taken from all patients.

Procedure

All patients were operated on using the Da Vinci Xi by the authors at Fortis Hospitals, Bannerghatta Road, Bangalore.

General anesthesia was administered, and an intraoperative nasogastric tube was placed to avoid a stomach injury as the robotic arms are placed

two inches above the umbilicus.

Abdominal entry was established with a Veress needle and four standard robotic ports of 8 mm each were used. After ensuring that patient was adequately strapped with shoulder support, a steep Trendelenburg position was given before docking the robotic arms.

The supraumbilical port was used for the camera with left port for monopolar scissors, the two right ports were used for the fenestrated bipolar and the prograsp forceps. An assistant laparoscopic port of 5 mm was placed in the left iliac region to facilitate suction and retraction of the sigmoid colon. The vaginal end dissection was done first to separate the vesicovaginal and the rectovaginal fascia off the vault. At the sacral end, care was taken to identify the right ureter and the right common iliac artery. The sacral promontory was then identified and dissected till the white glistening anterior longitudinal ligament was reached. A retroperitoneal tunnel was then established from the sacral to the vaginal end, taking care not to injure the right ureter. A Y shaped mesh was fashioned extracorporeally with a macroporous polypropylene mesh and introduced inside. The short arms were sutured using non absorbable prolene sutures to the anterior and posterior vaginal vault, ensuring hemostasis. The mesh was then tunneled retroperitoneally and the tension was adjusted to ensure optimal reduction of prolapse, taking care not to make it too tight or too loose. The long arm of the mesh was then sutured to the anterior longitudinal ligament, taking care to avoid the pre sacral vessels. The excess mesh was then cut off and removed. After ensuring a d e q u a t e h e m o s t a s i s , reperitonisation was done with 2-0 vicryl . The skin ports were closed with 3-0 monocryl.

Results

The average age of the patients was 68 years (65-81 years). The vault prolapses ranged from stage 2 to 4 with commonest being stage 2. All the patients were symptomatic.

The mean operating time ranged from 2- 4 hours with a mean of three hours including robotic docking. The operating time shortened considerably, after the first eight cases. Only one patient needed post-operative ICU stay which was due to her co morbidities. There was minimal intraoperative blood loss of less than 200 ml in all patients. There was bladder injury in the first 2 patients which was recognized intraoperatively due to hematuria. For these two patients, intraoperative cystoscopy was done, the incorporated suture was cut, and fresh suture was taken. There were no other complications noted thereafter.

Postoperative pain score with numeric rating scale was done. The average score was 2(range of 1-3) on day 0.

All patients were started on liquids six hours postoperatively and moved to solids on post-operative day one. The foleys catheter was removed after 12 hours in all patients except two patients who had bladder injury, in whom it was removed after 48 hours. All patients were discharged on post-operative day two.

At 6 weeks follow up, all patients were comfortable with 2 patients reporting occasional constipation.

Discussion

Sacrocolpopexy has been established as the gold standard for vaginal apical prolapse especially with coexistent anterior compartment prolapse as it replicates the natural vaginal axis the most, compared to the other vaginal and abdominal methods available for vault prolapse correction. Robotic Sacrocolpopexy is rapidly emerging as

the ideal minimally invasive method to treat apical prolapse as it offers the added advantage of high magnification with dexterity.

In our case series, the operating time significantly shortened after the initial six cases, thus highlighting the shorter learning curve of robotic surgery as opposed to laparoscopic surgery. The intraoperative blood loss is very minimal with least post-operative pain and short postoperative stay.

The drawbacks of Robotic surgery remain the cost and length of surgery which are expected to both reduce in the near future with the advent of newer robotic systems and greater awareness of Robotic surgery among surgeons and patients alike.

Conclusion

Robotic Assisted Sacrocolpopexy is an ideal minimally invasive approach to correct apical vault prolapse. With more precise standardization and training of the entire team of surgeons and support staff, operating time and complications can be greatly reduced. This will enable us to deliver the best available care worldwide to patients in the Indian subcontinent.

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Figure 1 :
Vesicovaginal Fascia Dissection



Figure 2 :
Rectovaginal Fascia Dissection



Figure 3 : Anterior longitudinal ligament exposure



Figure 4 : Retroperitoneal Tunneling



Figure 5 : Fixing of anterior short limb of mesh to vault



Figure 6 : Fixing of posterior short limb of mesh to vault



Figure 7 : Fixing of Long limb of mesh to anterior longitudinal ligament of the sacrum



Figure 8 :
Final Image after Reperitonisation

We Saved the Day-Gastric Conduit Necrosis in a case of Esophageal Carcinoma- Surgical Oncology Team-Fortis BG Road



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A 56 years old gentleman, diagnosed with carcinoma oesophagus was treated with neo adjuvant chemo radiation and underwent Robotic esophagectomy and oesophagogastric anastomosis. On postoperative day 3 he developed a fever and was diagnosed to have a conduit leak. Endoscopy showed a conduit necrosis involving the upper 2/3rd of the conduit. He was referred to our team for the further management. (Figure 1)

Patient was initially stabilised with antibiotics and intravenous fluids and taken up for a definitive surgical procedure the next day. A right colonic interposition was planned. We performed the procedure laparoscopically and prepared the right colon for the same. The necrosed stomach conduit was delivered back into the abdomen, the distal end was stapled and the necrosed stomach was excised. Retrosternal dissection was performed laparoscopically. The proximal end of the oesophagus was prepared for the anastomosis through a left neck incision after

excising the medial end of the clavicle. The mobilised right colon was brought into the neck through the retrosternal space and anastomosed to the oesophagus. Distally an ileo gastric anastomosis was made to maintain the continuity. The patient had an uneventful postoperative period and was started orally on day 5 and is discharged home on Day 7.

Conclusion

Gastric conduit necrosis is a known complication in case of carcinoma oesophagus. In the era of the minimally invasive approach to treat primary oncological surgeries, we can manage major complications also by the minimally invasive approach. All the rescue conduit options (Right Colon, Transverse Colon, Left Hemicolon) have to be kept in mind before doing the procedure.



Figure 1



Breast Cancer Management – Importance of Diagnosis in Early Stages



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In last few decades there has been a sea change in the management of breast cancer.

Radical removal of breast and lymph nodes called as radical mastectomy is

replaced by breast conserving surgery. Surgical clearance of axillary lymph nodes for every patient is now replaced by radioactive tracer based sentinel lymph node detection followed by selective nodal clearance. This lesser surgery still gives equivalent outcomes in terms of cancer control as compared to more radical surgery but also translates into better quality of life for women with breast cancer. Women have lesser pain, better shoulder mobility, better cosmesis and lesser lymphedema with conservative surgery for breast and axilla.

Similarly, radiation therapy for breast cancer is now given over 3-4 weeks as compared to 5-7 weeks of radiation till few years back. Few women with favorable early stage breast cancer are candidates for accelerated partial breast radiation therapy (APBI) which

is delivered over only 4 days.

Likewise, many women with breast cancer may not require traditional chemotherapy and may just do well on hormonal and targeted therapy.

Who are these women with breast cancer who will need lesser surgery, radiation therapy and chemotherapy? Answer is these are women who have breast cancer diagnosed in early stages.

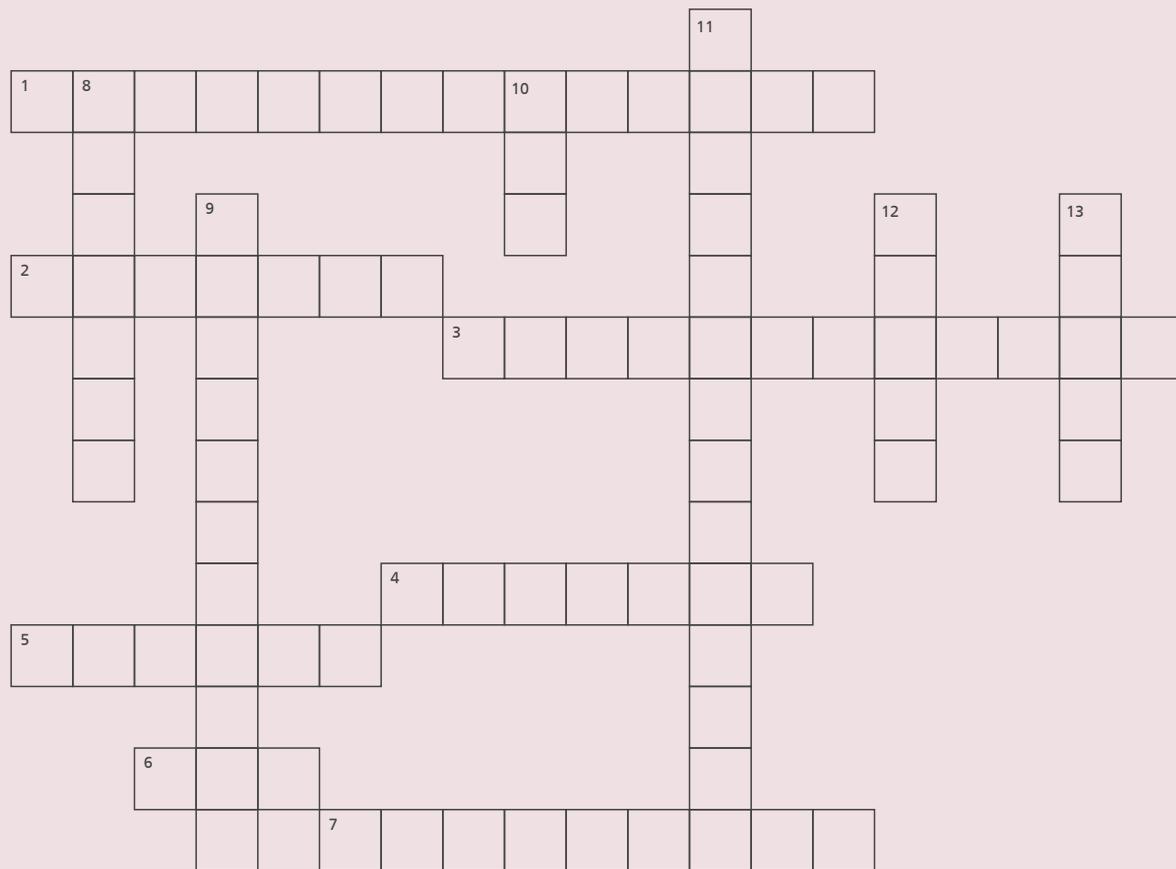
Key to lesser treatment and better outcomes is detection of breast cancer at an early stage. Unlike cervical cancer, we do not have vaccine for breast cancer prevention. Breast cancer cannot be prevented but can be detected at an early stage by doing regular self-examination and imaging.

Let's be breast cancer aware. Our health in our own hands.



TRIVIA

Crossword

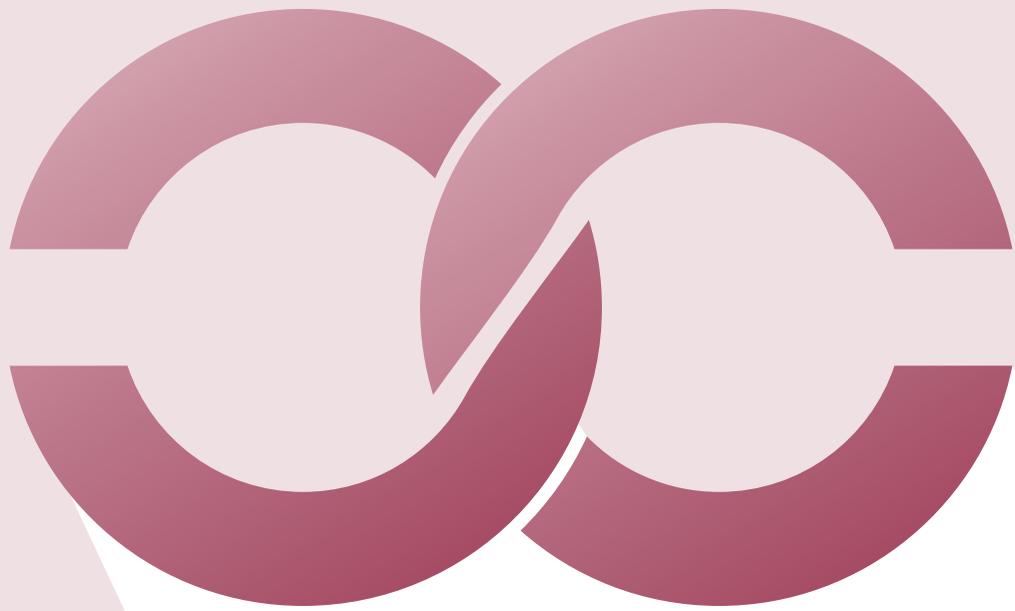


ACROSS

- _____ can help relieve heavy menstrual bleeding.
- A low-dose _____ can help reduce the risk of preterm birth in mothers with preeclampsia.
- _____ and increased risk of heart disease are the most serious health concerns associated with menopause.
- Diagnostic test for pregnancy-_____.
- Pregnancy can increase the risk of _____ in younger women.
- Abdominal pain, the absence of menstrual periods are possible symptoms of _____.
- Single best way to detect breast cancer in its earliest form is a _____.

DOWN

- _____ can actually worsen menopause symptoms.
- A _____ dietary habit may increase cancer risk for some women.
- The _____ is responsible for the majority of cervical cancers among women between 25 and 50 years of age.
- _____ disease is the leading cause of death for women globally.
- Women between the ages 21 and 29 should get a PAP smear at least once every _____ years.
- Women are _____ as likely to experience clinical depression as compared to men.



CLINICAL TRIALS

Important Research Projects at Fortis

A Prospective, Multi-centre, Phase IV Study for Post-Marketing Safety Evaluation of Recombinant Anti-Rho(D) Immunoglobulin in the Prevention of Maternal Rh-Isoimmunization



PI- Dr Niti Kautish
 Director, Obstetrics and Gynaecology
 Fortis Escorts Hospital, Faridabad

Study is being conducted across Thirty centres in India. Unit enrolled six patients in the study. The investigational product is AntiD™ (Recombinant Anti Rho-D Immunoglobulin) from Bharat Serums and Vaccines Ltd.

Need of AntiD™ (Recombinant Anti Rho-D Immunoglobulin)

Haemolytic disease of the foetus and new born (HDFN) results in the destruction of the foetus or newborn's red blood cells caused by maternal immunoglobulin G antibodies against red cell antigens. Anti Rho-D Immunoglobulin preparation contains IgG Anti-D (anti-Rh) for use in preventing Rh immunization. These are antibodies that bind and cause destruction of foetal Rh D positive red blood cells that have passed from the foetal circulation to the maternal circulation. Therefore, in a Rh-negative mother it can prevent sensitization of the maternal immune system to Rh D antigens, which can

cause rhesus disease in the current or in subsequent pregnancies.

About The Study

AntiD™ (recombinant anti Rho (D) immunoglobulin) will be administered at a dose of 300 mcg/ 150 mcg within 72 hours of sensitizing event to Rh negative female subjects. The primary objective of the study is to evaluate the safety of Recombinant Anti-Rho(D) immunoglobulin when administered as prophylaxis to prevent Rh negative women from forming antibodies to foetal rhesus positive red blood cells,

that may pass into the maternal blood during childbirth, abortion or certain other sensitizing events

PI Opinion About The Study Drug

Conducting multicentric trials is a valuable addition for the benefit of patients which the mankind can procure. Though the efficacy of Anti-D in preventing sensitization of RH negative women is proven but further substantiating the fact increases the awareness among RH negative women. The added advantage is free of cost drug availability to these kind of women.



An Open Label, Post Marketing, Single Arm, Clinical Registry to Evaluate Safety, Tolerance and Performance of Fiona™ Levonorgestrel – Releasing Intrauterine System



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Vasant Kunj, New Delhi

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The study will include 300 subjects PAN India. Dr. Niti Kautish enrolled five patients whereas Dr. Neema Sharma enrolled four patients in the study.

Need of Fiona™ Levonorgestrel

Contraceptives are used for demographic control and recently for improved reproductive health. They are administered on individual requests to space childbearing or limit number of children, or to avoid pregnancy because of severe disease. Intrauterine contraception (IUC), also referred as an intrauterine device (IUD) or intrauterine system (IUS), is a long-acting reversible contraceptive method that involves the placement of a small T-shaped device inside the uterus. The contraceptive coil comes in two different types: copper-based intrauterine devices (IUD) and hormonal intrauterine devices. Fiona™ is an implantable Hormone Releasing Intrauterine Device. This

device consists of T-frame made from Polyethylene, Drug Reservoir (Hormonal Core) and Delivery System. Levonorgestrel, a type of progestin that releases 20 µg of Levonorgestrel per day in vivo and is effective for 5 years.

About The Study

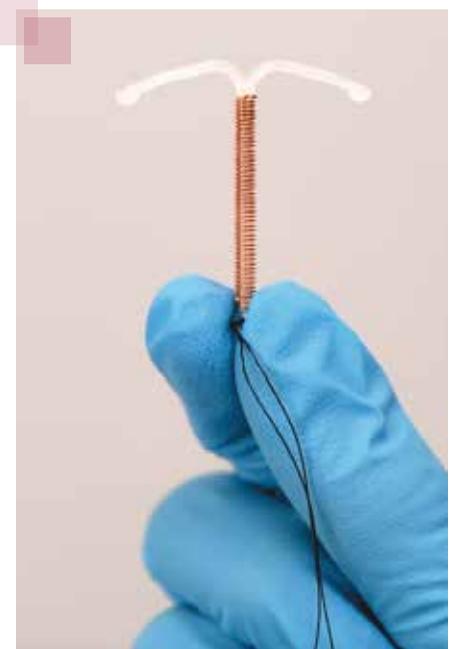
Intra uterine contraceptive devices are used for birth control for many years. The Copper and plastic devices in loop and "T" forms are considered to be safest modes of birth controls with highest efficacy. This method of contraception is preferred because it is a reversible method of birth control / family planning and is simpler than the contraceptive pills and external contraception methods like condoms and vaginal barriers. In rare cases, the failure of contraception due to auto expulsion of IUCD or even in presence of IUCD may occur. In a very few cases the safety issues like ectopic pregnancy and endometritis may occur. A few females also report some tolerance issues like severe vomiting, lower back ache and leucorrhoea, which are usually self-limiting. Many of these issues are modified with controlled hormone release from the device. Hence, a small healthy volunteer population, representative of the reproductive age female population of the given locality is observed for the elution period to record the issues pertaining to performance, safety and efficacy of the device. Event free survival and non-pregnant period with normal active sexual life is considered to be safe and successful performance of the device. Fiona-1 study is a study based upon the same principles for safety and performance evaluation of Fiona™ Levonorgestrel Releasing Intrauterine System.

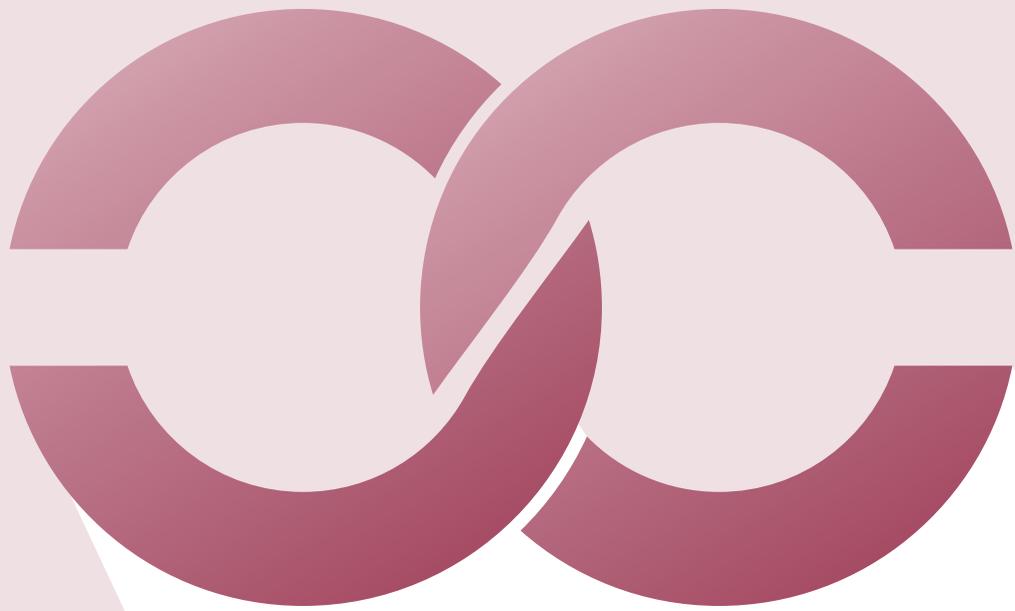
PI Opinion of Study Drug by Dr Niti Kautish- Fortis Escorts Hospital, Faridabad

Contraception is one thing which women should have the right to choose. Fiona being a medicated IUCD works wonders both as contraceptive and in cases of AUB. This study not only provided the IUCD (Cost- 4500 INR) free to the patient but it significantly reduced AUB in the women. It was one of the most fruitful studies.

PI Opinion of Study Drug by Dr Neema Sharma- Fortis Flt Lt Rajan Dhall Hospital, Vasant Kunj, New Delhi

We enrolled 4 patients for LNG releasing IUS. They were enrolled basically for contraception but 2 patients had abnormal uterine bleeding also. It was easy insertion. All 4 patients came for follow-up after 1 month. They were comfortable and had no complaints. 2 patients were lost to follow-up and we are in touch with 2 patients. They have complete amenorrhoea and are comfortable.





ONCO CONNECT

Tumour Board Cases



Carcinoma Cervix - Cervical Lesion with Dilemma in Pathology

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Cervical lesion with dilemma in pathology

- 58-year-old female with history of bleeding per vagina since the last three months. On per vaginal/per speculum examination, there was an ulcero-proliferative growth seen over the anterior lip of cervix the anterior and lateral fornices and upper 2/3rd of vagina. Bilateral parametrium was involved. Rectal mucosa was free. Biopsy was suggestive of moderately differentiated adenocarcinoma.
- **MRI Pelvis:** Cervical mass lesion extending to the lower uterus, urinary bladder (causing irregular mucosal thickening, bilateral parametrial extension, bilateral external iliac lymph node. No HUN. No liver metastatic lesions.
- **CECT Abdomen & Pelvis:** Heterogeneously enhancing cervical mass measuring 5.3X6.6cms indenting the lower uterus and upper 2/3rd of the vagina and invasion of the base of the bladder is seen with intravesical enhancing soft tissue density. Diffuse parametrical fat stranding. Sub-centimetric lymph node along iliac vessel in pelvis.
- Patient received 3 cycles of NACT with Paclitaxel and Carboplatin
- **PET CT (Response assessment)** showed Interval decrease in the size of lesion in the cervix measuring 28 x31 x47mm, max SUV 3.4(prior 53 x66mm)

involving lower 1/3rd of uterus, abutting posterior wall of urinary bladder with no definitive bladder infiltration, significant parametrical fat stranding seen, not involving vagina. FDG avid right external iliac lymph node is seen measuring 12 x14 mm with max SUV 2.9. Few Bilateral external, internal and common iliac lymph node measuring 3 to 7mm are also seen.

Patient was then planned for definitive chemo radiation followed by interstitial brachytherapy.

Radiation Therapy

- **Technique:** Image guided Radiation therapy (IGRT)
- **Source:** Linear Accelerator-Versa HD, Energy: 6MV photons
- **Volume & Dose:** PTV50: Primary + Bilateral pelvic lymph nodes:
 - -5000cGy in 25Fr @ 200cGy/Fr, 5Fr/week.
 - SIB to PTV57.5: Gross nodes
 - -5750cGy in 25Fr @ 230cGy/Fr, 5Fr/week.
 - From 04/10/2021 to 06/11/2021
 - Along with concurrent chemotherapy 3 weekly Inj. Paclitaxel 260 mg +Injection Carboplatin 450mg x 5 cycles

Brachytherapy

- Ir192 HDR source intracavitary brachytherapy 6Gy X 1 fraction
- In view of bicytopenia invasive procedure was not done
- Interstitial brachytherapy 6Gy X 3 fractions
- Response assessment PET-CT done after 3 months
- Residual lesion in cervix with marked response to CT-RT.

Residual lymphadenopathy in bilateral external iliac lymphadenopathy with decrease in size and FDG avidity.

- Biopsy of lesion-Adenocarcinoma
- Patient underwent Robotic TAH-BSO and bilateral pelvic lymphadenectomy

Histopathology

- Adenoid Cystic carcinoma
- Intermediate grade with stromal invasion of 1.4cm into deep 1/3rd of cervix
- All margins are free
- Right PLND-1/7 with ENE+
- Left PLND-4/7 with ENE +
- Stage-ypT1b1N1a

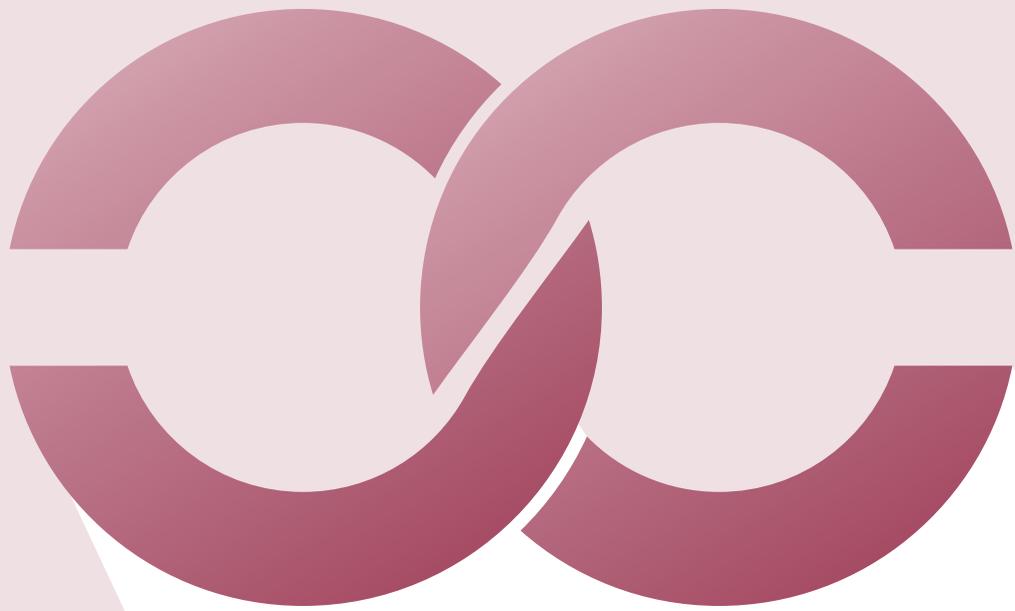
Point for discussion

- **Adjuvant treatment? chemotherapy?**

The Tumor board advised to review both the pre surgery biopsy slides and post-surgery final histopathology. If the final diagnosis is adenoid cystic carcinoma, then patient doesn't require any adjuvant treatment and if its adenocarcinoma then patient will require adjuvant chemotherapy.

- **Any indication of Definitive chemo radiation if adenoid cystic carcinoma was picked up before??**

If adenoid cystic carcinoma was detected preoperatively then patient would have gone directly for radical hysterectomy as there would not have been any indication of pre-operative chemotherapy or chemo radiation.



**PUBLISHED
LETTERS TO THE
EDITOR-COVID**

TITLE: COVID-19 with Severe Gestational Hypertension and Preterm Premature Rupture of Membranes- Confounding Laboratory Parameters Simulating HELLP Syndrome and Chorioamnionitis



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Ethical Committee Approval

This article doesn't contain any studies with human participants performed by any of the authors. Verbal consent obtained from the patient for publication.

Abstract

The COVID-19 pandemic has caused havoc and collapse of the health systems in many countries, as we continue to understand its pathophysiology and impact on pregnant women.

In comparison to the first wave, where we noted an increase in the number of preterm deliveries; several recent studies have found an increase in the obstetric complications like preeclampsia, HELLP syndrome, intrauterine growth restriction, preterm deliveries, ICU admissions and mortality in pregnant women.

Laboratory parameters overlap in patients with COVID 19 and severe gestational hypertension, raising the suspicion on HELLP syndrome due to raised transaminases and low

platelets. Leucocytosis and raised CRP are often seen in COVID 19 leading to confusions during the expected management of preterm premature rupture of membranes.

We present a case of severe gestational hypertension with preterm premature rupture of membranes at 27 weeks with COVID 19 with confounding laboratory parameters leading to temporary dilemmas in the management.

Maternal values of sFLT and PLGF along with sFLT/PLGF ratio help differentiate women with COVID-19 infection from severe preeclampsia but are not readily accessible in various parts of the country.

Clinical monitoring of signs of chorioamnionitis, a close watch on worsening of laboratory parameters and the blood pressures along with monitoring the fetal health with obstetric Doppler and CTG in later gestations help in: unnecessary, interventions and iatrogenic prematurity without compromising on the maternal health.

Keywords

COVID-19, HELLP syndrome, PPROM, gestational hypertension, chorioamnionitis

Introduction

SARS-COV-2 is a novel enveloped RNA virus responsible for the COVID-19 pandemic.

This disease involves multiple systems of the body and ranges from an asymptomatic or a mild illness to a severe illness (1) leading to an increased morbidity and mortality.

Laboratory parameters like leucocytosis, elevated C- reactive protein, raised serum transaminases, D-dimer and LDH pose a challenge when dealing with patients positive for COVID-19 with preterm premature rupture of membranes and severe preeclampsia as they overlap with the diagnosis of chorioamnionitis, HELLP syndrome and DIC(2). Post-operative anticoagulation may have to be withheld in patients with HELLP syndrome or COVID-19 with falling

platelets, despite the knowledge of the prothrombotic nature of COVID-19.

We present a case of COVID -19 with severe gestational hypertension and preterm premature rupture of membranes with elevated transaminases, falling platelets and elevated CRP that led to temporary dilemmas in the management.

Case

Mrs XY, aged 34, Primigravida with 27 weeks' gestation was admitted with cough for 48 hours and p/v spotting for 2 hours.

Covid RT PCR on admission was positive.

Antenatal ultrasounds at 12 and 20 weeks had shown a high resistance flow pattern in the rt uterine artery along with multiple uterine fibroids. She was started on Tab Ecosprin 150mg at bedtime from 12 weeks gestation post the ultrasound. Her blood pressures were in the normal range during her antenatal visits.

On Examination

No Pallor, icterus or oedema

Vitals: PR: 90/min, BP: 150/100mmhg, RR: 20/min, Afebrile.

Chest: Clear, SPO2: 98% in room air

Abdominal examination: Uterus 26 weeks' gestation, relaxed, non-tender, breech presentation, FHR-140/min.

Speculum examination: Active blood tinged watery discharge noted, cervical os closed, 2cm long, posterior.

Deep tendon reflexes: Normal

CTG: Baseline heart rate of 140/min with poor beat-beat variability.

Urine albumin -negative.

Blood investigations:

Hb -13g/dl

Total count- 4500 with lymphopenia

Platelet count -1.5l

Serum transaminases were raised -

AST-49U/L, ALT -47U/L

Uric acid-5.8mg/dl

Serum creatinine:0.8mg/dl.

Serum ferritin-228.5ng/ml

D dimer- 1.17mcg/dl

LDH:199mcg/l.

C reactive protein was raised at 15mg/l.

Coagulation Parameters-Normal

Peripheral smear: no evidence of haemolysis.

Emergency bedside ultrasound: Breech presentation with a growth lag of 2 weeks with foetal parameters corresponding to 25 weeks; expected foetal weight of 720g, AFI of 8cm. No evidence of placental abruption.

In view of raised liver enzymes and high blood pressures, a differential diagnosis of

1) Partial HELLP syndrome with gestational hypertension and PPROM

2) Gestational hypertension with PPROM and raised liver enzymes, lymphopenia with elevated CRP secondary to COVID 19 was made after the initial evaluation.

She was started on antihypertensive, antibiotics and antenatal steroids and monitored with intermittent auscultation of the foetal heart rate.

Obstetric Doppler of the foetus done after 6 hours of admission revealed a reversal of flow in both umbilical arteries along with reversal of flow in the ductus venosus.

An emergency LSCS was done in view of the Doppler findings. Multiple fibroids were noted along the anterior wall of the uterus, two of which were in the lower uterine segment in the line of the uterine incision, measuring 3*3cm and 2*2 cm respectively. A myomectomy was done along with the LSCS and the two fibroids in the lower uterine segment were removed to facilitate placement of the incision and extraction of the

baby. Breech extraction was easy and a live female baby of 640g with apgars of 4/10 and 8/10 was delivered and shifted to NICU.

Prophylactic anticoagulants were started 6hours post-surgery.

Post-operative day(POD) 1:

Hb:12.2g/dl, TC:6800, platelet count:1.4 lakh, AST:34U/L and ALT : 39 U / L , serum creatinine:0.8mg/dl.

Antihypertensive were continued in view of blood pressures ranging from 140/90 to 160/100mmhg.

POD 3:

Petechiae was noticed above the caesarean scar site prior to discharge.

Hb: 11.8g/dl, platelet count :1.0lakh.

In view of falling platelets, decision to stop anticoagulants was taken after a discussion with the physician. Strict advice on hydration and ambulation were given along with orders to report if she developed signs of DVT/ pulmonary embolism.

POD 7:

BP:120/70mmhg, wound healthy

Hb:12g/dl

Platelet count-1.4l

Liver enzymes: AST:79U/L and ALT:50U/L.

Coagulation profile- Normal

Renal parameters-normal.

She was started on ursodeoxycolic acid 300mg BD by the gastroenterologist in view of raised liver enzymes and asked to repeat her liver function tests and coagulation profile after a week.

Blood pressures monitored at home Q8th hourly were normal; hence antihypertensives were tapered and stopped on POD14.

As the baby was shifted to a higher centre in view of complications pertaining to prematurity, the patient

was lost to follow up.

She returned to the outpatient clinic 6 weeks' post-surgery with a normal liver function (AST:24U/l, ALT:32U/l) and coagulation.

Conclusion

The COVID-19 pandemic has caused havoc and a collapse of the health systems in many countries, as we continue to understand its pathophysiology and impact on pregnant women.

In comparison to the first wave, where we noted an increase in the number of preterm deliveries; several recent studies have found an increase in the obstetric complications like preeclampsia, HELLP syndrome, intrauterine growth restriction, preterm deliveries, ICU admissions and mortality in pregnant women (3).

Our patient was a case of severe gestational hypertension with fetal growth restriction and reversal of flow in bilateral umbilical arteries along with preterm premature rupture of membranes at 27 weeks.

Laboratory investigations on admission revealed elevated liver enzymes and a raised CRP.

The liver enzymes increased further on post-operative day 7 after an initial fall 24 hours post-delivery. An increase in the liver enzymes after delivery is unusual in HELLP syndrome, with most cases of postpartum HELLP presenting with raised liver enzymes resolving within 48 hours of delivery. The platelet count fell post-delivery, while on low molecular weight heparin and quickly returned to near normal values once the thromboprophylaxis was withheld.

Elevated liver enzymes are often noted in HELLP syndrome, but are also commonly encountered in a COVID positive patient (3).

Elevated CRP and leucocytosis in a

COVID positive patient could easily be confused as a sign of intrauterine infection secondary to PPROM, hence it's important to look for the clinical signs of chorioamnionitis while on expected management.

Postoperative anticoagulation poses a problem in women with falling platelet counts despite the knowledge of thrombosis associated with COVID-19.

Maternal values of sFLT and PLGF along with sFLT/PLGF ratio may help differentiate women with COVID-19 infection from severe preeclampsia avoiding needless intervention and iatrogenic prematurity (4) if the foetal well-being is not compromised as in this case. However, it's limited accessibility and availability in all parts of India pose a problem.

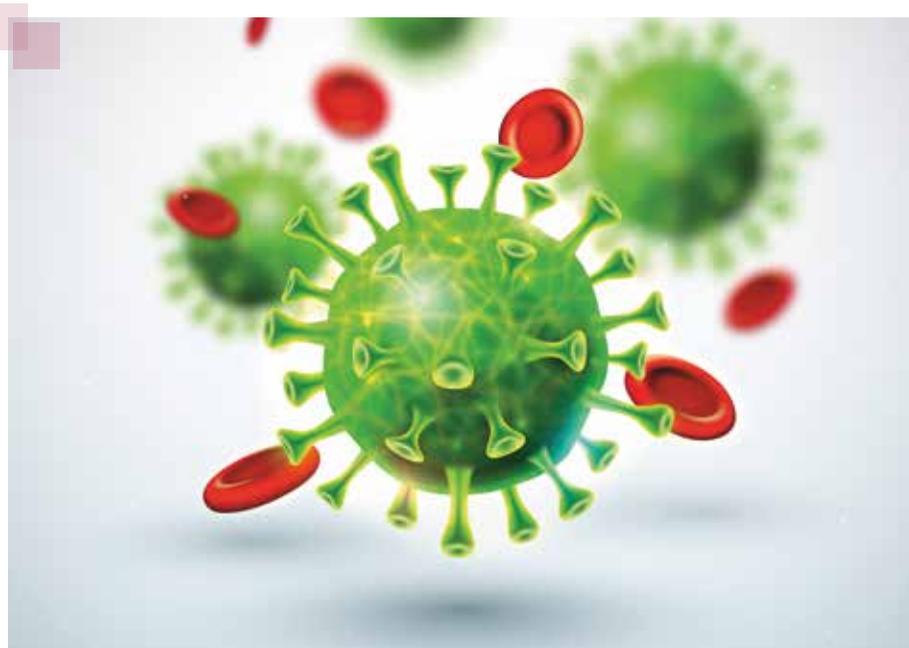
Serial monitoring of clinical signs of chorioamnionitis, imminent eclampsia, worsening of laboratory parameters, uncontrolled hypertension along with imaging modalities indicating poor foetal health help in the timely management of such cases, averting maternal morbidity and mortality.

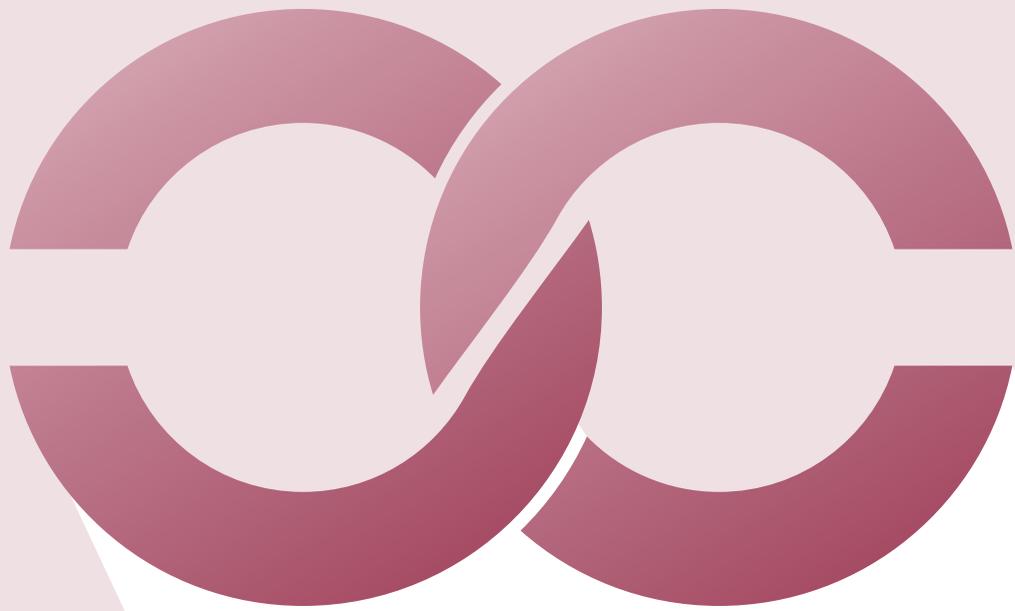
A multidisciplinary approach in the intrapartum and postpartum period

along with educating the patient of the signs and symptoms of worsening disease and deep vein thrombosis at discharge is essential for a good maternal outcome.

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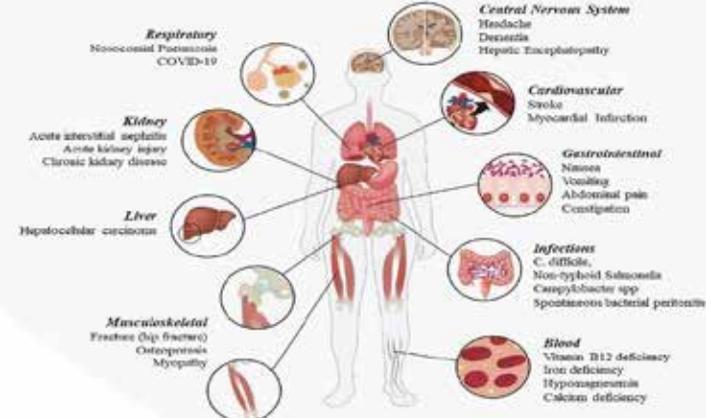
MEDICATION SAFETY UPDATE

Medication Safety Update - An Initiative of Fortis Central Pharmacy & Therapeutics Committee (CPTC) and MSOG



MEDICATION SAFETY UPDATE
MAY 2022





APPROPRIATE USE & STEWARDSHIP OF PROTON-PUMP INHIBITORS

POTENTIAL ADVERSE EFFECTS ASSOCIATED WITH PROTON PUMP INHIBITORS THERAPY

INDICATIONS AND CONTRAINDICATIONS FOR THE USE OF PPI THERAPY

PPI USE IS APPROPRIATE IN CASE

- Gastro-esophageal reflux disease + H. pylori eradication + H. pylori-negative peptic ulcers
- Healing of NSAIDs-induced gastric ulcers Gastroprotection in case of one (mild risk) or more (moderate to severe) risk factors Age>70 years
- NSAIDs use at high doses or in combination with other drugs (steroids, SSRIs, warfarin)
- ASA use, even at low dosage in elderly patients, or combined with NSAIDs or steroids or anticoagulants
- Critically ill patients on prolonged mechanical ventilation
- Pathologic hypersecretory conditions (Zollinger-Ellison syndrome)

PPI USE IS AVOIDED IN CASE

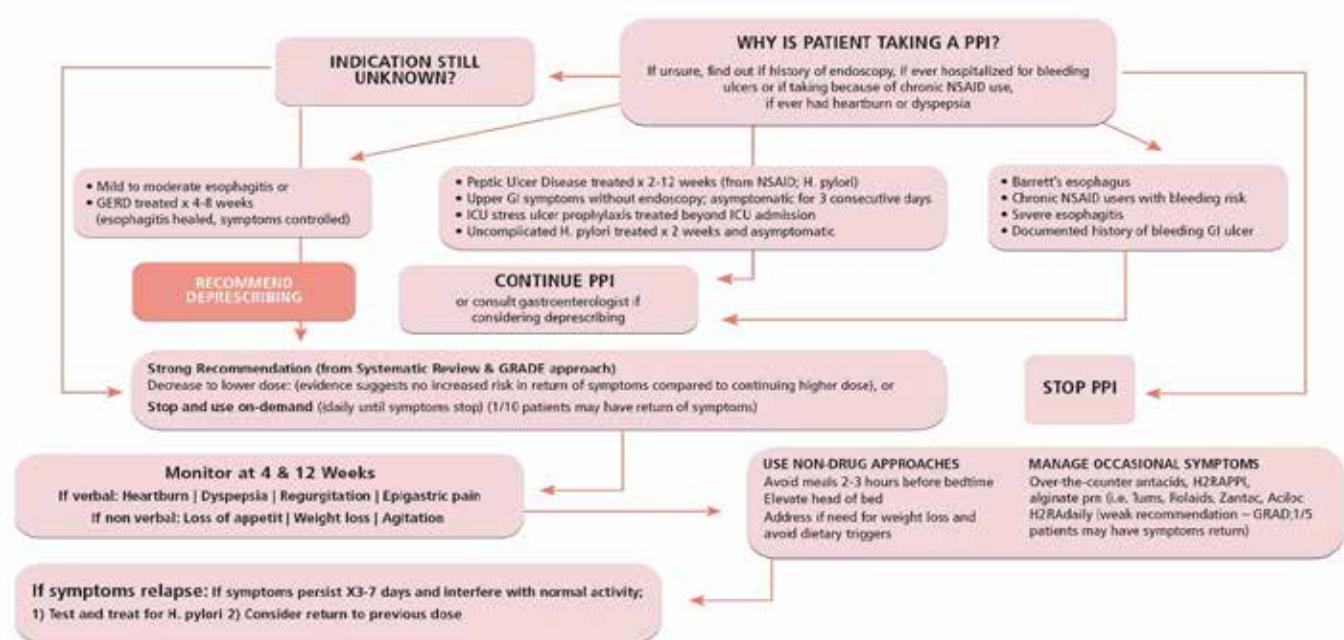
- NSAIDs/ASA use in patients < 70 years or without other risk factors Steroid use alone
- Coxib use in patients < 70 years or without risk factors Low molecular weight Heparin or warfarin use without risk factors
- Ticlopidin or Clopidogrel use alone without risk factors + Bisphosphonate or SSRI use
- Antibiotic or chemotherapeutic agents use + Patients with functional heartburn + Patients with multifocal atrophic gastritis
- Patients with functional dyspepsia (postprandial distress syndrome) + Patients with subtotal or total gastrectomy
- Patients with decompensated chronic liver disease & severe portal hypertension, in the absence of a severe acid-related condition

PPI USE IS CONSIDERED IN CASE

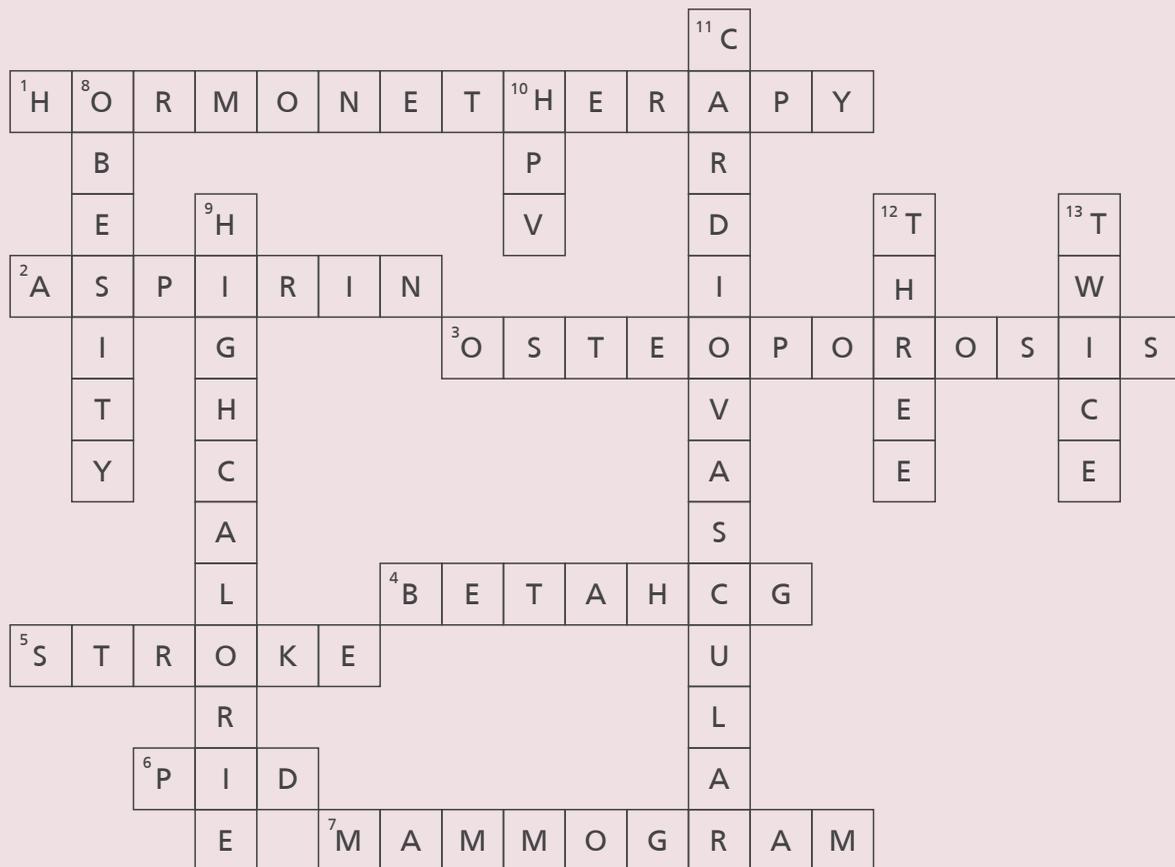
- Warfarin use in prior upper GI bleeding + Acute NSAIDs use in patients taking chronically anticoagulant drugs of any type + NSAIDs-induced dyspepsia + Patients with functional dyspepsia (epigastric pain syndrome)

*NSAIDs, non-steroidal anti-inflammatory drugs; GI, gastrointestinal; SSRIs, selective serotonin re-uptake inhibitors; ASA, acetylsalicylic acid; PPI, Proton Pump Inhibitors

PROTON PUMP INHIBITOR (PPI) DEPRESCRIBING



Answers To The Crossword



ACROSS

1. **Hormone therapy** can help relieve heavy menstrual bleeding.
2. A low-dose **aspirin** can help reduce the risk of preterm birth in mothers with preeclampsia.
3. **Osteoporosis** and increased risk of heart disease are the most serious health concerns associated with menopause.
4. Diagnostic test for pregnancy-**BetaHCG**.
5. Pregnancy can increase the risk of **stroke** in younger women.
6. Abdominal pain, the absence of menstrual periods are possible symptoms of **PID**.
7. Single best way to detect breast cancer in its earliest form is a **Mammogram**.

DOWN

8. **Obesity** can actually worsen menopause symptoms.
9. A **high calorie** dietary habit may increase cancer risk for some women.
10. The **HPV** is responsible for the majority of cervical cancers among women between 25 and 50 years of age.
11. **Cardiovascular** disease is the leading cause of death for women globally.
12. Women between the ages 21 and 29 should get a PAP smear at least once every **three** years.
13. Women are **twice** as likely to experience clinical depression as compared to men.

The Fortis Network



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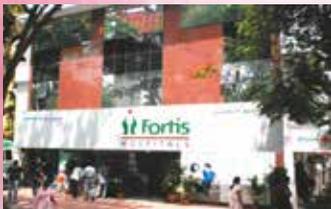
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Vashi

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