



Billroth  
Hospitals

# HEALTH IS BEYOND WEALTH



VOLUME - 05

MATTERS OF  
WOMEN'S HEALTH



**Dr. V. Jeganathan**  
Founder, Billroth Hospitals

# MAN WITH VISION...

*"It has been said that a gentle word, a warm hand, a willing ear and small acts of kindness, often taken for granted, can change a life. We believe that to be true. Because we have seen first-hand the power of caring with compassion."*

**~ Dr. V. Jeganathan - Founder**

## *The Seed Was Sown*

An extraordinary physician of our times, Dr. V. Jeganathan watched thoughtfully as the first bricks for his dream hospital were laid. His vision for creating a world-class healing environment which would attract the best medical minds was taking shape. He dreamt of creating an institution which would serve as a beacon of hope to patients from across the world, offering them the highest standards of excellence in medical care, delivered with compassion. And so began a journey that started with a 70-bed hospital for Gastroenterology. Now Billroth Hospitals, offers entire spectrum of Cancer Care and elevates cancer treatments through Medical, Surgical and Radiation Oncology.

**SINCE 1990, THERE WERE NO COMPROMISES AND NO LOOKING BACK AT **BILLROTH HOSPITALS.****

*Ready to Care*  
**EVERYWAY EVERYDAY**

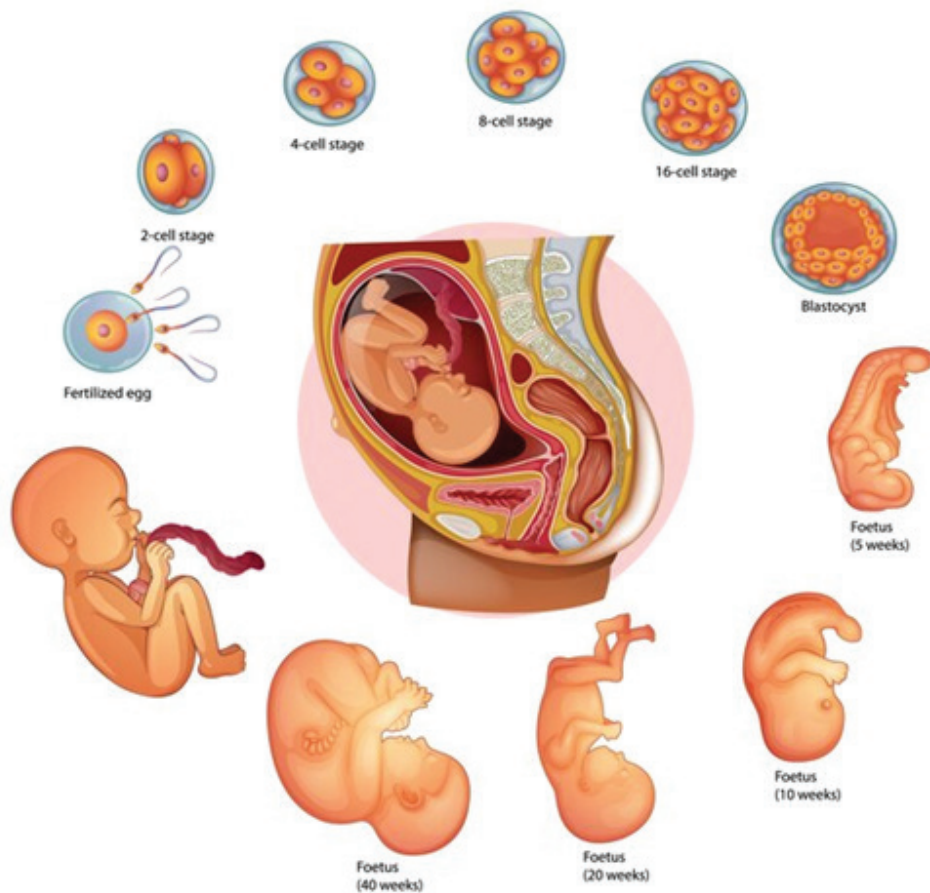


# GYNAECOLOGY, OBSTETRICS, PEDIATRICS & IVF

Providing Hope Cutting-edge Specialized  
care delivery Life-changing results

We at Billroth, continue to be inspired every day. Our team works together to provide outstanding care to the women in our community, to educate tomorrow's leaders in women's health care, and to make discoveries that will advance women's health. While this past year has brought challenges, including a lingering pandemic, nursing and staff shortage - we continue to strive to achieve our mission: deliver better health and hope to all women and their families through compassionate care, innovation, education, and discovery.

## FETAL DEVELOPMENT

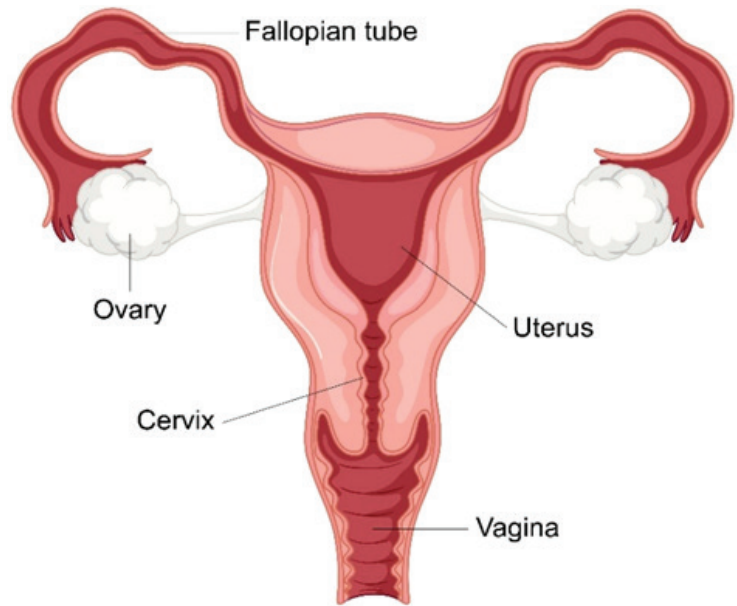


As a department, we are unwavering in our commitment to provide and advocate for comprehensive women's health care.

# FEMALE REPRODUCTIVE SYSTEM

## What is the female reproductive system and how does it work?

The female reproductive system is involved in sexual activity, fertility, pregnancy and childbirth. It is made up of female body parts including the following:



- **Ovaries** There are 2 ovaries, 1 on each side of the uterus where female hormones (oestrogen and progesterone) are produced, and eggs are stored to mature. Every month, an egg is released. This is called ovulation.
- **Fallopian tubes** These are 2 thin tubes that connect the ovaries to the uterus, allowing the egg to travel to the uterus.
- **Uterus (the womb)** The lining of the uterus thickens with blood and other substances every month. If pregnancy occurs, the fertilised egg will implant in the uterus and grow into a foetus and then a baby. If it does not, this lining flows out of the body. This is known as menstruation or your period.
- **Cervix** This is the lower part of the uterus, that connects the uterus to the vagina.
- **Vagina** This is a muscular tube connecting the cervix to the outside of the body.



# THE WONDER WOMB:

## Amazing facts about the uterus

### Fact 1

The uterus could fit in the palm of your hand and is about the size of a smartphone. Its wall is made up of three layers of muscle, allowing it to grow and stretch during a pregnancy, eventually reaching right up to the belly button.

The uterus could build and shed its lining (made up of nutrients, tissue, and blood cells) approximately 500 times during your lifetime.

### Fact 2

### Fact 3

The uterus is the strongest muscle in your body by weight. The Guinness Book of Records lists the jaw muscle as the strongest, but that's only because we've never seen a competition that pits the force of one uterus against another!

The uterus is usually pear shaped, but sometimes it can look like a heart. This is called a bicornuate uterus and it's around a 4 in 1000 chance that you have one.

### Fact 4

### Fact 5

The uterus has the ability to grow a whole new organ - the placenta! During pregnancy, the placenta acts like many organs at once - like skin, a liver, kidney, and lung - to help a baby grow and thrive.

The uterus has a direct connection with the brain. Some scientists think the health of your uterus might be connected to your ability to remember things!

### Fact 6



# DO YOU KNOW???

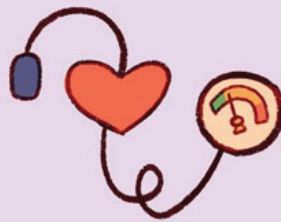
## Some women are born without a uterus

There are women who are born without a uterus, and this condition is called Mayer-Rokitansky Küster-Hauser syndrome (MRKH). In this disorder, the vagina also doesn't develop properly and all the reproductive functions get hampered.

### Lifestyle Changes to Help Manage Living With Uterine Fibroids



Reduce stress by practicing relaxation activities like yoga



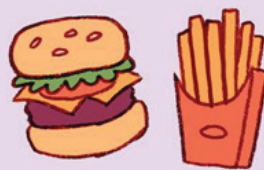
Lower blood pressure



Exercise regularly and eat a healthy diet



Quit smoking



Avoid soybeans and processed foods



Limit alcohol and red meat consumption





# HEALTHY HABITS FOR A HAPPY UTERUS:

## Lifestyle Tips to Promote Gynecological Well-Being

**Stay Active:** Exercise for Uterine Health

**Nourish Your Body:** Eat for Uterine Wellness

**Maintain a Healthy Weight:** Uterine Health and Body Mass Index (BMI)

**Prioritize Sleep:** Rest for Uterine Restoration

**Stress Management:** Relaxation for Uterine Balance

**Routine Check-ups**



### 5 Foods to Improve Uterus Health



Nuts and Seeds



Leafy Vegetables



Fresh Fruits



Whole Grains



Lemons



## CASE REPORT: 01

# OVARIAN ENDOMETRIOSIS:

## Ovarian Reserve Preservation Techniques At Laparoscopic Conservative Surgery For Endometriotic Cyst

**Introduction:** Laparoscopic conservative surgery for endometriosis has evolved into a standardized procedure with clear, reproducible, and consistent steps to strike a balance between disease clearance and ovarian reserve preservation.

**Method:** Certain essential information that I document helps in deciding the extent of surgery.

1. Parity and fertility concerns.
2. Predominant symptoms: dysmenorrhoea and/or dyschezia/pre-ART.
3. Preoperative AMH (mandatory for most cases) and AFC (Antral Follicle count).
4. Number of cysts and septations within the cyst and a rough endometrioma mapping from ultrasound.
5. Postoperative plan: downregulation, progestogens, and fertility treatment.

In the past 5 years, out of the 186 ovarian endometriomas (around 124 patients were for fertility and the rest for other symptoms) that we operated at our tertiary referral institute and fertility center (Billroth and Adithri fertility centers), post-surgery spontaneous pregnancies numbered 23; the rest were mostly downregulated and already planned for ICSI. There wasn't a major change in the Antral Follicle count 3 months post-surgery (we do not repeat serum AMH routinely, but we document the AFC), and we had recurrences in 4 patients (2 patients post-surgery and 2 patients at 2-year follow-up), out of which 2 patients needed surgery.

A few standard steps described by the dedicated endometriosis surgeons enable optimal clearance, which can be tailored according to fertility needs.

- Sigmoid mobilization,
- Ovarian cyst: restoring anatomy; salpingo ovariolysis; using a suction cannula for gentle dissection to avoid bleeding of neovascular vessels; cystectomy
- If needed, ureterolysis and lateralizing
- Dissecting the lateral to pararectal plane.

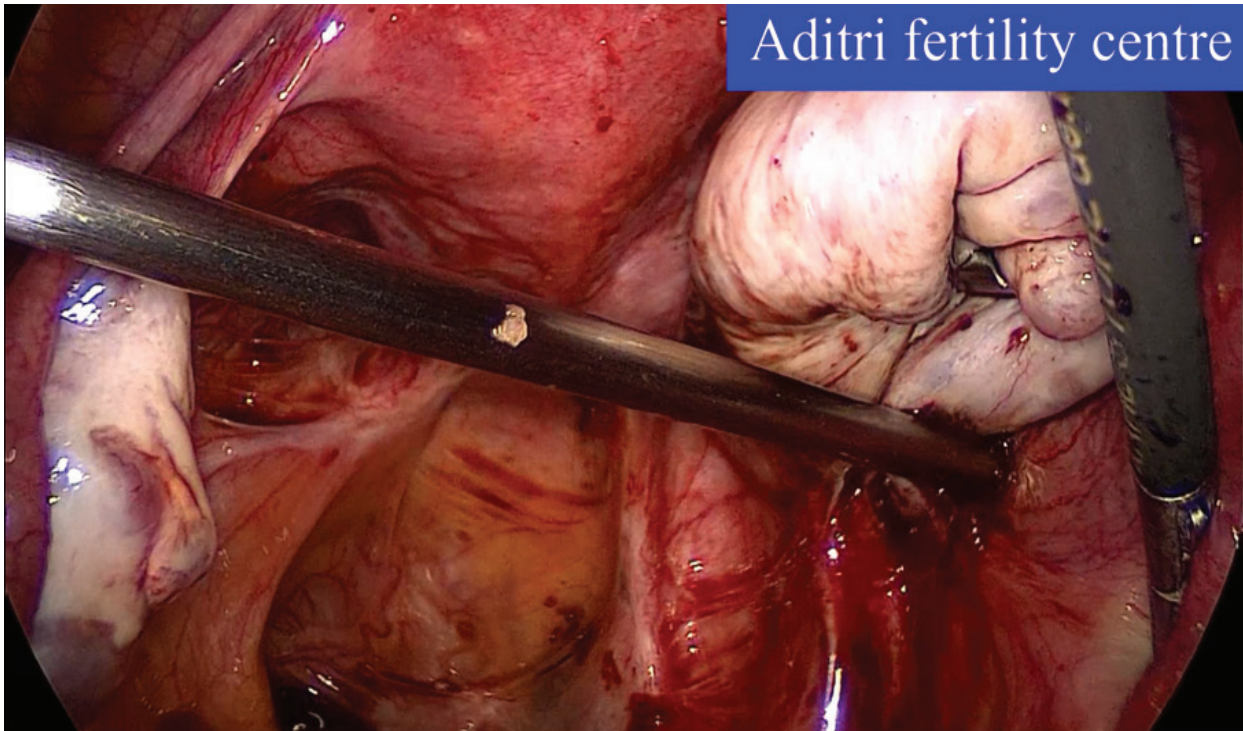


Sigmoid mobilization with scissors, sonocision, or shearer with adequate assistant countertraction medially and cranially. Care should be taken to release congenital bands too, as it can give a clearer view of the left adnexa when performing cystectomy and ovariolysis.

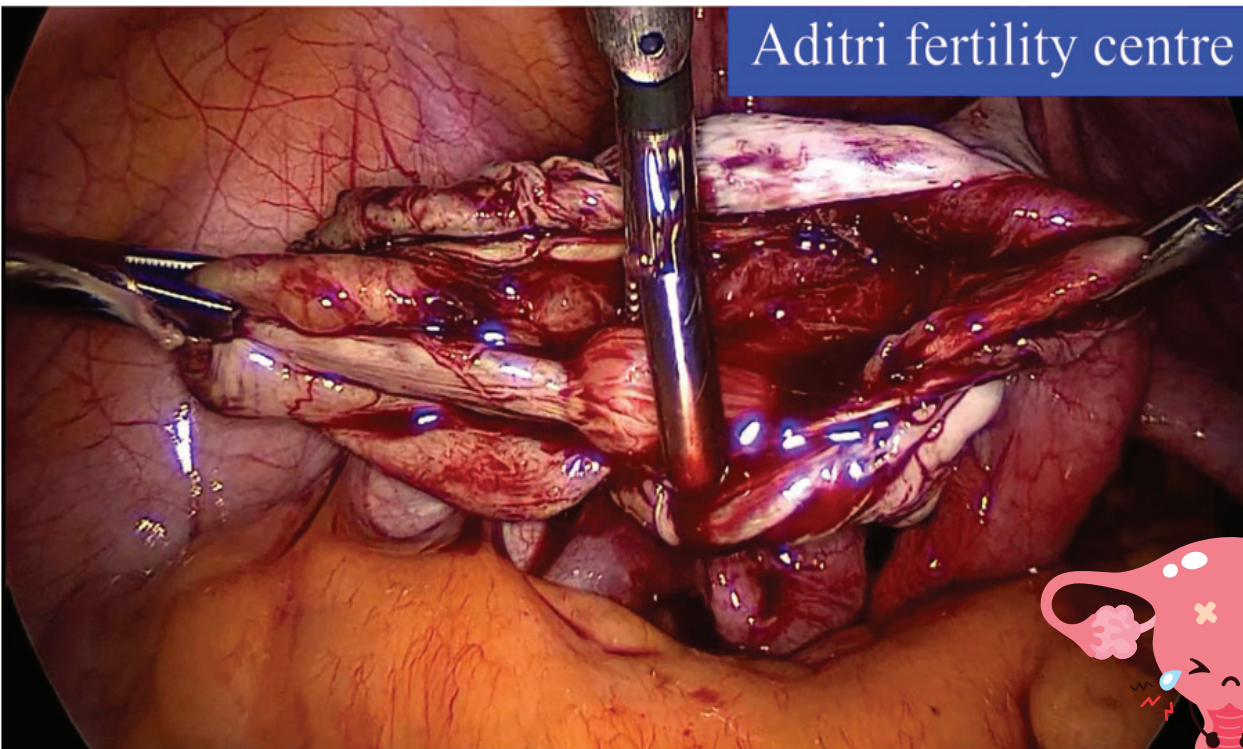




## Ovarian cyst: mobilization of ovaries by gentle traction and push technique with suction cannula

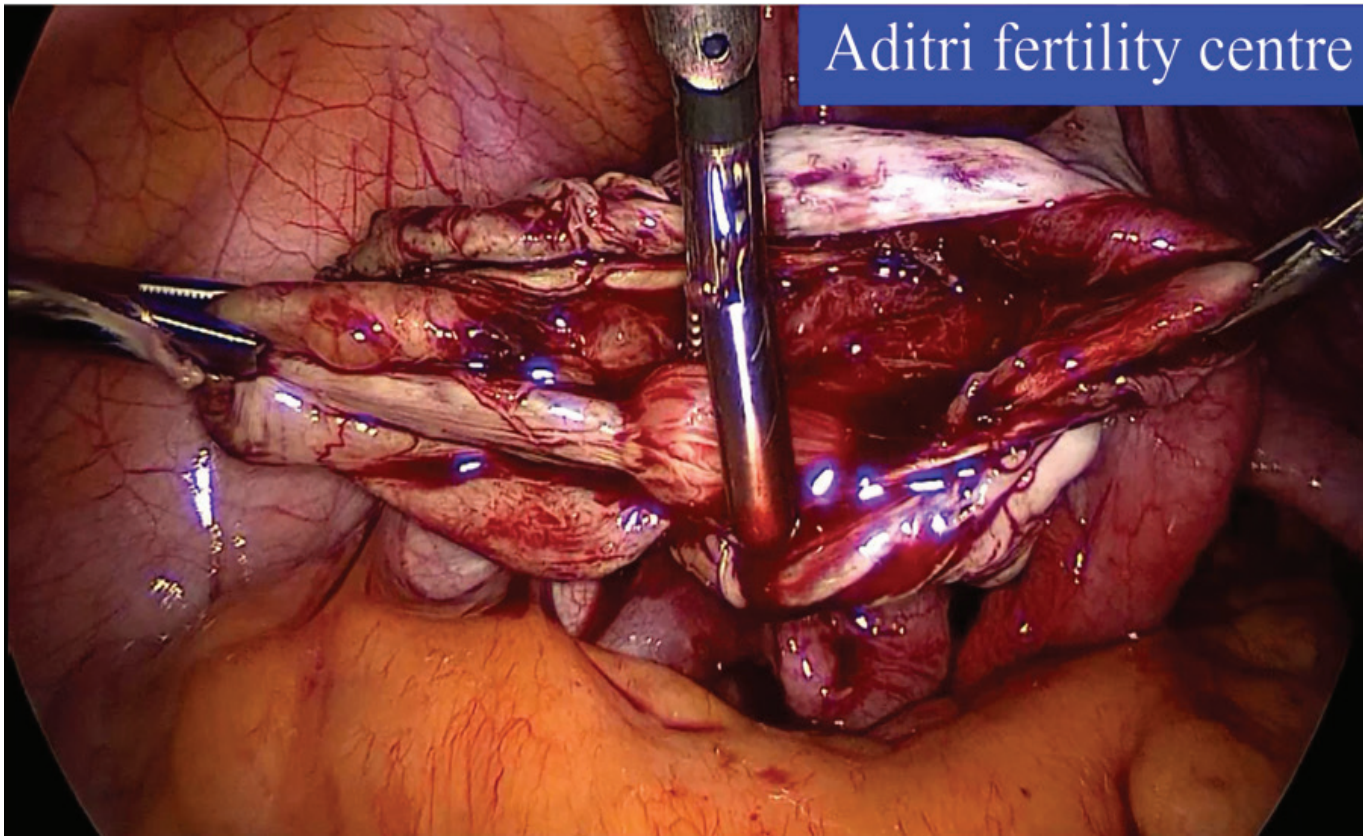


**Ovarian cystectomy** with three instruments: one tooth to hold on to the cyst wall, one non-toothed to hold, suspend, and stabilize the ovary, and one non-toothed to separate the cyst from the ovary with gentle traction.





- Avoiding ovary trimming (as most follicles are in the cortex) and isolated ovarian drainage without cystectomy,
- Minimal usage of electrocautery and
- Reconstruction of the ovary by gentle apposition of the ends of the opened-up ovary (instead of suturing) helps preserve the ovarian reserve.



Suspension of the ovaries (an optional step) enables posterior exposure when performing rectal dissection. The use of sutures to suspend the ovaries through the abdominal wall with gentle traction enables easy dissection. Lifting the uterus gently and releasing uterosacral adhesions are done in the pararectal space. Identification and lateralization of the ureters are important when performing radical rectal shaving and resection procedures.

## CONCLUSION:

Repetitive attempts to follow these outlined steps guided us when there were moderate to severe adhesions in the pelvis. It enabled adequate clearance without drastically compromising the ovarian reserve or fertility.

**DR DHIVYA NARASIMHAN MD(OG)**  
**CONSULTANT GYNAECOLOGIST AND ENDOSCOPIC SURGEON**



## CASE REPORT: 02

# Triad Trouble And The Triumph

A 37-year-old woman, married for 2 years, came to Adhithi with a complaint of primary infertility.

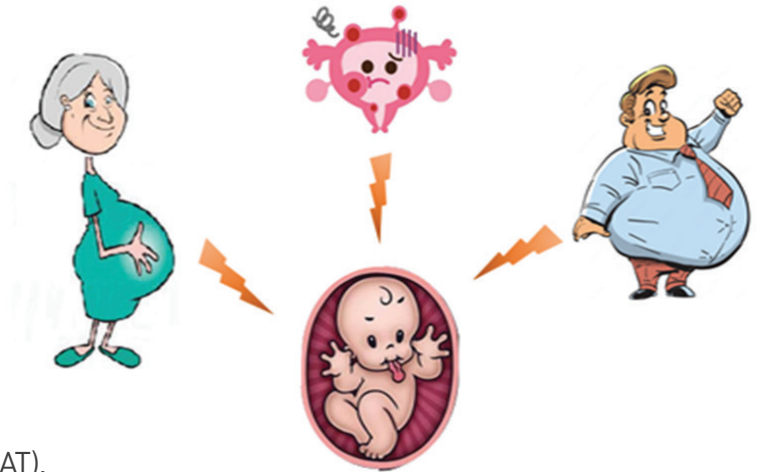
Evaluation of female partner: h/o regular menstrual cycle, BMI: normal but non-consummated marriage

Evaluation of male partner: erectile dysfunction, known hypertensive and diabetic under medication, BMI of 49.9.

Semen analysis: Oligoasthenoteratozoospermia (OAT).

Counselling was done for the couple after a detailed history was taken and consent was obtained for Trans-vaginal scan.

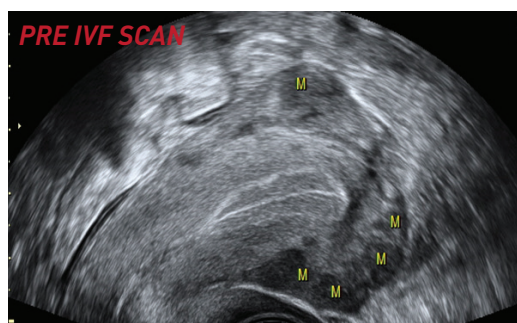
USG showed multiple myomas, a submucous myoma was detected, and the ovarian reserve was normal.



***Submucous myoma was detected at the mid uterine cavity and hysteroscopic myomectomy done in January 2022***

Conservative treatment for a few months was advised, followed by 2 IUI cycles (semen sample-OAT).

Given female age, multiple seedling myomas and OAT, ICSI was advised. A pre-IVF evaluation was done.

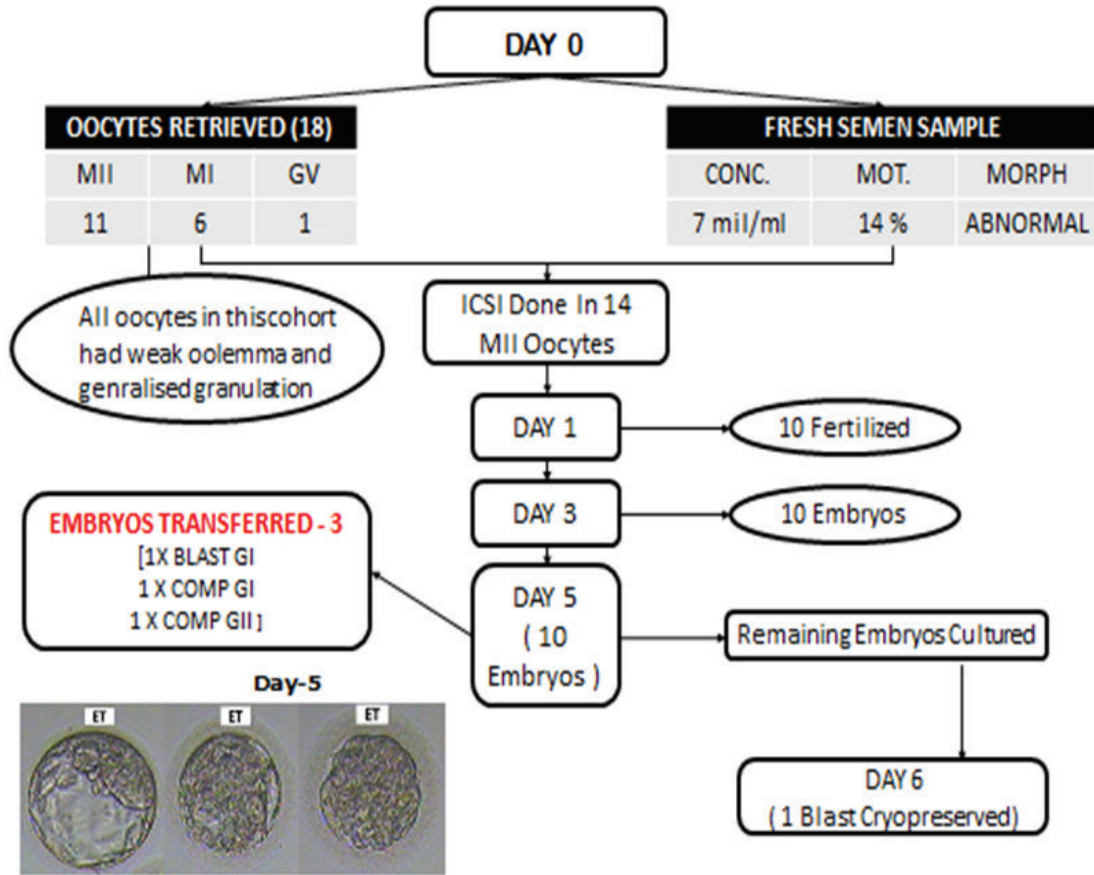


The first IVF cycle with the agonist protocol was abandoned on day 8 given a premature LH surge.

The second IVF agonist downregulation was done, stimulation with pure FSH+LH X was done for 10 days, and oocyte retrieval was done 35 hours after the HCG trigger.



# EMBRYOLOGY CHART



Two weeks after embryo transfer, the patient was reviewed with Bhcg reports (872 mIU/mL) pregnancy was documented with a single conception. Now she is in a 24- to 26-week ongoing pregnancy.

## DISCUSSION

Fibroids are present in approximately 5–10% of patients presenting with infertility. Fibroids distort the endometrial cavity, obstruct the tubal ostia, and clog canal, all of which can impair sperm migration and fertilization. Implantation of an embryo may be impacted by an alteration in uterine function due to impaired uterine contractility or damage to the endometrium.

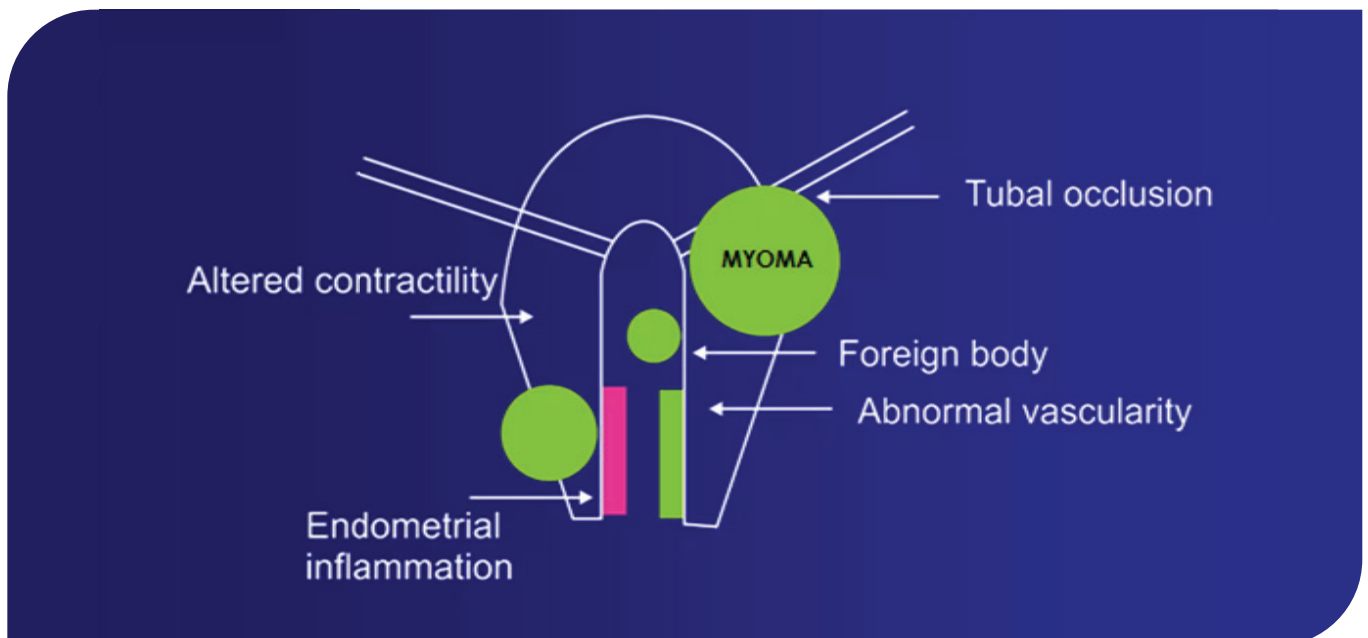




Increased maternal age shows a marked decline in both the quality and quantity of oocytes, which leads to an increased risk of infertility, miscarriage, and birth defects. Thus, altered gamete quality increases the aneuploidy rate, especially in the mid-thirties, due to incorrect chromosome segregation during meiosis, which is exceptionally prone to error in females. As age increases, there will be a progressive decline in cytoplasmic quality, which is linked to gene regulation during the entire period of oocyte growth. In the presented case, the oocyte quality during ICSI showed weak oolema, vacuoles, and generalized granulation that may be due to the patient's age.

Obesity in males results in hypogonadotropic hyper-estrogenism and hypogonadism via central and peripheral pathways. Obesity is characterized by systemic inflammation, which commonly increases ROS levels and results in a high DNA Fragmentation Index (DFI). Bibi et al., in their study, concluded that a group of males with an increased BMI, i.e., >24.5, had high DFI, impaired spermatogenesis, altered semen parameters, and decreased pregnancy rates when compared to the group with a BMI <24.5.

In the profound realm of fertility treatments, the resilience showcased by the couple through trust and patience stands as a testament to their unwavering determination. Despite the setbacks encountered, such as an abandoned stimulation cycle, their enduring faith in the process remained unshaken. The pivotal role of our gynecologist, especially for the hysteroscopic myomectomy, cannot be overstated, as their expertise and care laid the foundation for the eventual triumph. This journey, marked by resilience and hope, embodies the profound fulfillment of the patient's dreams of parenthood, a journey culminating in the cherished gift of a successful pregnancy.



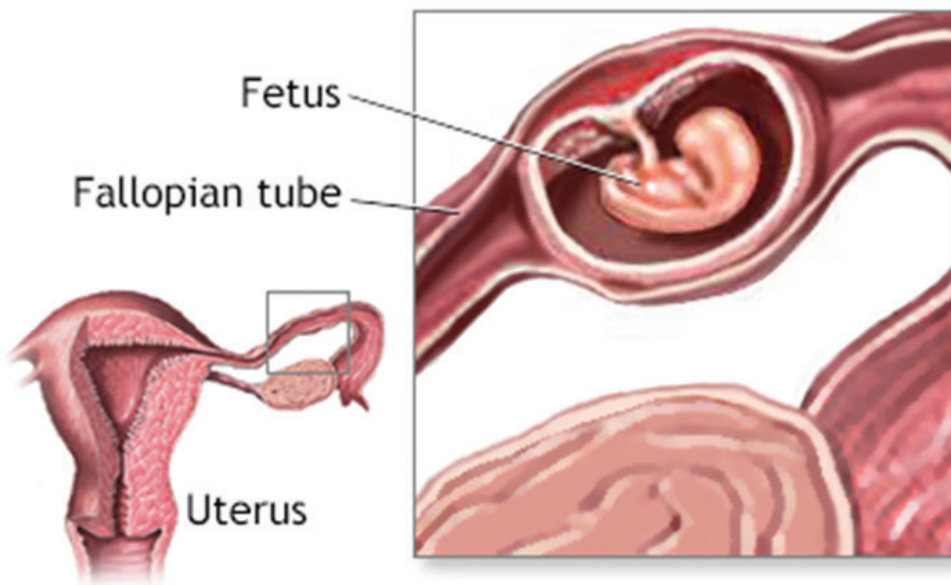
**DR. V. RAJINI M.B.B.S, D.G.O,**  
**INFERTILITY CONSULTANT EMBRYOLOGIST**

## CASE REPORT: 03

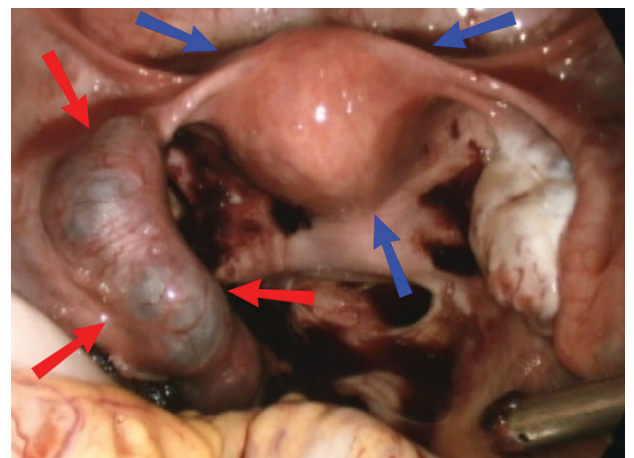
# From Emergency to Recovery Triumph Over a Ruptured Ectopic Pregnancy

A 37-year-old woman, was admitted to the emergency room with severe abdominal pain and a history of recurrent fainting episodes. Her last menstrual period was on November and a urine pregnancy test confirmed the positive news. An ultrasound revealed bilateral adnexal mass lesions, moderate ascites with septations, and mild diffuse bladder wall thickening. Despite the urgent need for surgery, the patient and her family hesitated, seeking further discussion and a second opinion.

Ectopic pregnancy



Further investigations, including a CT abdomen, uncovered significant hemorrhagic fluid in the pelvis, with heterogeneous contents surrounding the uterus and ovaries. The possibility of a ruptured right ectopic pregnancy loomed large. The Serum Beta HCG level was found to be 16,640. In a sudden turn of events, the patient collapsed, prompting an immediate shift to the Critical Care Unit (CCU). The medical team sprung into action, initiating resuscitation, administering central lines, and commencing intravenous antibiotics. They were determined to stabilize her condition and prevent any further complications.]





In a state of hypovolemic shock with a hemoglobin level of 6.4 gm, the patient underwent emergency laparotomy to address the diagnosed right ruptured ectopic pregnancy. With the patient under general anesthesia, a pfannensteil incision exposed the layers of the abdomen. One liter of blood and clots were removed, and the right ruptured ectopic pregnancy was excised and ligated during the salpingectomy. Suctioning, blood transfusion, and thorough washing were performed. The left tube, bilateral ovary, uterus, and other structures were found to be normal, and meticulous closure followed.

Post-surgery, the patient was closely monitored in the CCU, receiving 8 liters of oxygen and noradrenaline infusion. Over the next few days, she underwent multiple blood transfusions but also developed complications such as respiratory distress and hypotension. Pleural effusion and pulmonary edema became apparent, requiring further investigations and interventions. The patient's platelet count dropped to 30, indicating severe sepsis and necessitating immediate medical intervention.

Billroth's multi-disciplinary team of doctors including Cardiologist, Gastroenterologist, and Pulmonologist, collaborated on her case. Pleural fluid aspiration, guided by diagnostic ultrasound, was performed. A multidisciplinary approach involving intensivists, hematologists, infectious disease specialists, and gastroenterologists was crucial in managing the patient's deteriorating condition. FFP, SDP, and other blood products were transfused, and she underwent additional treatments to address sepsis and hematological issues.

As days passed, the patient's resilience shone through. With inotropic support, oxygen therapy, and a carefully monitored diet, she gradually improved. By the seventh postoperative day, she was on minimal oxygen support and had her central line removed.

Her overall condition stabilized, allowing her to be shifted to the general ward. Injections and medications were gradually tapered off, and she was eventually, with a prescription for follow-up medications. During her stay in the general ward, the patient received regular physiotherapy sessions to regain her strength and mobility. The medical team also provided her with detailed instructions on post-operative care and lifestyle modifications to ensure a smooth recovery process.

This patient's recovery was a testament to her strong will and the dedicated care provided by the medical team. The diligent monitoring and gradual reduction of treatments ensured a smooth transition to the general ward and eventual discharge, providing her with a prescription for continued care after leaving the hospital.

The careful management of her treatment plan and the gradual reduction of interventions allowed for a successful transition eventually getting her back on her feet.

***DR V. JAYALAKSHMI MBBS, MS (OBG), FMIS (LAP)***  
***SENIOR CONSULTANT OBSTETRICIAN AND GYNAECOLOGY LAP SURGEON***



## CASE REPORT: 04

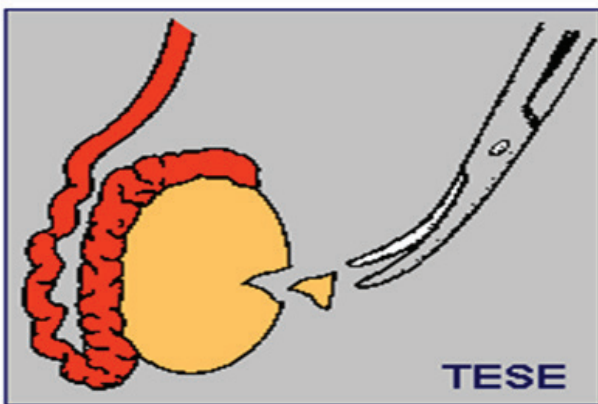
# No Sperm, No Surrender: Embracing Hope in Infertility.

A 30-year-old lady married for 4 years with primary infertility came to Adhitri IVF with her husband's semen analysis report showing Azoospermia. A testicular biopsy done outside in 2018 showed few sperm, but cryopreservation was not done. Couple ignorant of the treatment options available.

Evaluation of female menstrual cycle: irregular BMI-normal, known hypothyroid, hysteroscopy (indication) done outside the 2019 normal study. USG was done in Adhitri, and IVF showed a total pre-antral follicle count of 10-12 in the ovaries. Anti-mullerian hormone-2ng/dl

Evaluation of male partner: repeat semen analysis confirmed Azoospermia. S.FSH- normal. USG: right testicular volume: 6.6 cc, left: 3.2 cc.

Counseling was done for the testicular biopsy and cryopreservation; further treatment options using the testicular sperm were detailed. In view of the small bilateral testicular volume, a tentative diagnosis of non-obstructive azoospermia was considered.

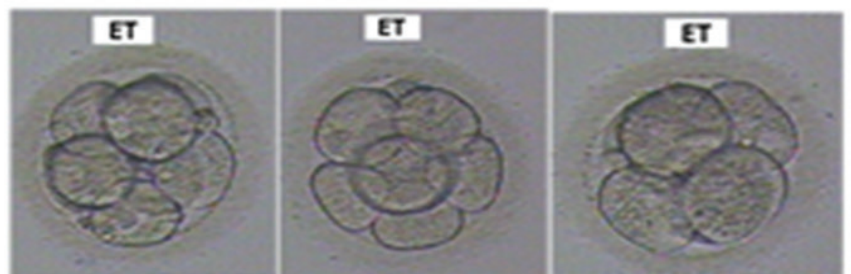


A testicular biopsy performed by urologist **Dr. Mani** revealed very occasional sperm with abnormal morphology.

Samples were frozen for TESA/ICSI.

IVF counseling was done as few sperm (male) were available for ICSI and in view of borderline ovarian reserve (female). A pre-IVF evaluation was done. IVF stimulation with HMG is done. Total number of dominant follicles: 10-11 after 11 days of injection with an endometrial thickness of 9 mm TL. Number of oocytes retrieved: 13 (10 M2).

Cryopreserved A testicular biopsy sample was thawed and tamed, and the twitching sperm were used for ICSI. No. of oocytes fertilized on Days 1-5 (50% fertilization). Day 3 transfer was done in view of only 3 Grade 1-8 cell embryos.





S.Bhcg, after 14 days, a positive early pregnancy scan showed twin conception. The patient was successfully delivered at 36 weeks by LSCS.



There's a prevailing belief that infertility issues primarily stem from the female partner, but this is a misconception. In reality, fertility problems can arise from various factors, impacting both men and women equally. While female factors can indeed contribute to infertility, male factors, lifestyle choices, genetic predispositions, and even combined issues between partners can significantly affect fertility.

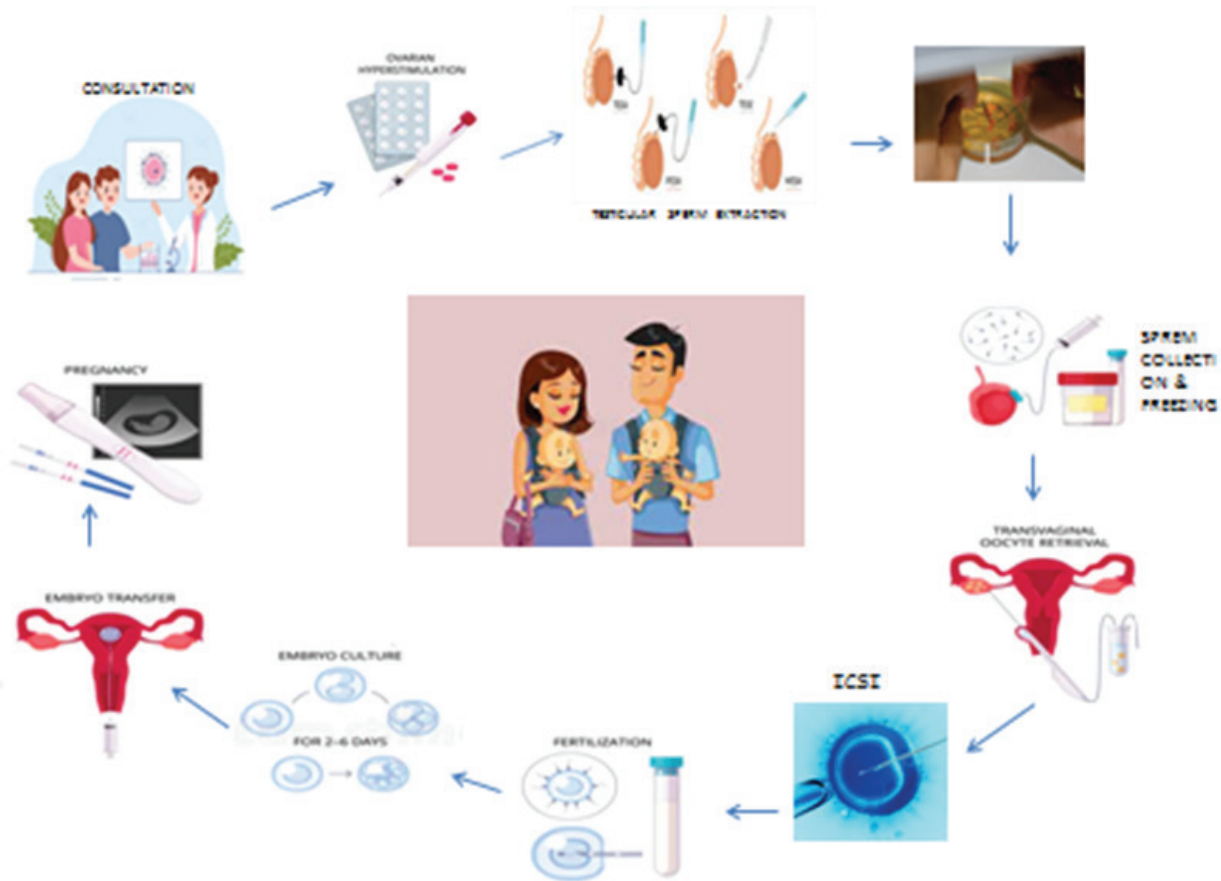
IVF treatment, though widely recognized, often lacks comprehensive understanding among patients and some doctors. Patients might not grasp the process's intricacies, risks, emotional toll, and financial commitments. Simultaneously, some medical professionals might lack updated knowledge due to the rapid evolution of technologies.





Azoospermia is always the most challenging diagnosis associated with infertility treatment, as there is a complete absence of sperm in semen. But it is not the end of the road for those seeking parenthood, with improved medical technology and treatment options available today. Several conditions that interfere with spermatogenesis and reduce sperm production and quality can lead to azoospermia. Azoospermia may also occur because of a reproductive tract obstruction.

Approximately 1% of all men are azoospermic, and 10 to 15% are infertile males. In the past, men with azoospermia were classified as infertile, and a sperm donor was initially considered one of the best options for conceiving, but the development of ICSI using surgically retrieved testicular stem cells has become a boon in treating azoospermic men.



Advancements in testicular biopsy techniques have been notable, particularly with the introduction of minimally invasive procedures like fine-needle aspiration and microdissection testicular sperm extraction (Micro-TESE).



These advancements aim to improve the accuracy of diagnosing sperm production problems while minimizing tissue damage and potential side effects. Micro-TESE, in particular, has revolutionized sperm retrieval in cases of severely impaired sperm production. It allows surgeons to pinpoint and extract small areas of the testicle where sperm are more likely to be found, increasing the chances of successful sperm retrieval for use in assisted reproductive techniques.

Mapping Biopsies: Utilizing advanced imaging techniques, mapping biopsies helps identify areas within the testes that have a higher chance of containing sperm. This targeted approach increases the probability of successful sperm retrieval in azoospermic men, helping them to achieve reproduction. With collaborative efforts from specialists like gynecologists, andrologists, and embryologists, there are possibilities and hope for individuals facing such circumstances. This is a testament to the progress and dedication in the field of reproductive medicine.



**DR. ESHITHA.D B.D.S, M.SC**  
**CLINICAL EMBRYOLOGIST**





## CASE REPORT: 05

# A Physiotherapist's Journey of Motherhood Through a High-Risk Pregnancy

A 28-year-old women physiotherapist, found herself on a unique and challenging journey when she discovered her pregnancy. A deep understanding of the importance of early prenatal care prompted her to seek a checkup around 6 to 8 weeks into her pregnancy. As a healthcare professional herself, she was well aware of the significance of timely and vigilant medical attention, especially given her own health challenges, including obesity, diabetes, hypothyroidism, and hypertension.

The scans during her early prenatal checkup revealed a reassuring sign—the presence of the fetal heart rate. This was a pivotal moment for the patient, whose journey was destined to be intricate due to her pre-existing health conditions. Nevertheless, armed 3as advised to minimize potential complications. The delicate balancing act of managing her blood sugar levels and keeping her blood pressure under control demanded meticulous attention from both the patient and her dedicated healthcare team. Regular checks and adjustments to her treatment plan were implemented, showcasing her proactive approach to her own health.

However, the postoperative period ushered in a new set of challenges. The patient's blood pressure stubbornly remained elevated, despite multiple medications. In response to this complication, the medical team recommended bed rest as a crucial component of her treatment plan. This phase was marked by uncertainty and anxiety, but the patient's determination, coupled with the relentless efforts of her healthcare providers, eventually led to the stabilization of her blood pressure.

The newborn, who initially experienced fetal distress during the LSCS, gradually recovered in the following 2 to 3 days. Reuniting with the mother, the infant's well-being became a beacon of hope amid the intricate medical challenges.

With her blood pressure and sugar levels finally under control, Mrs. Lakshmi Priyanka was discharged, carrying not only the joy of a newborn but also the perseverance she forged through a high-risk pregnancy.

The patient returned home, not just as a physiotherapist but also as a resilient mother, ready to embrace the joys and responsibilities of motherhood.

**DR V. JAYALAKSHMI MBBS, MS (OBG), FMIS (LAP)**  
**SENIOR CONSULTANT OBSTETRICIAN AND GYNAECOLOGY LAP SURGEON**

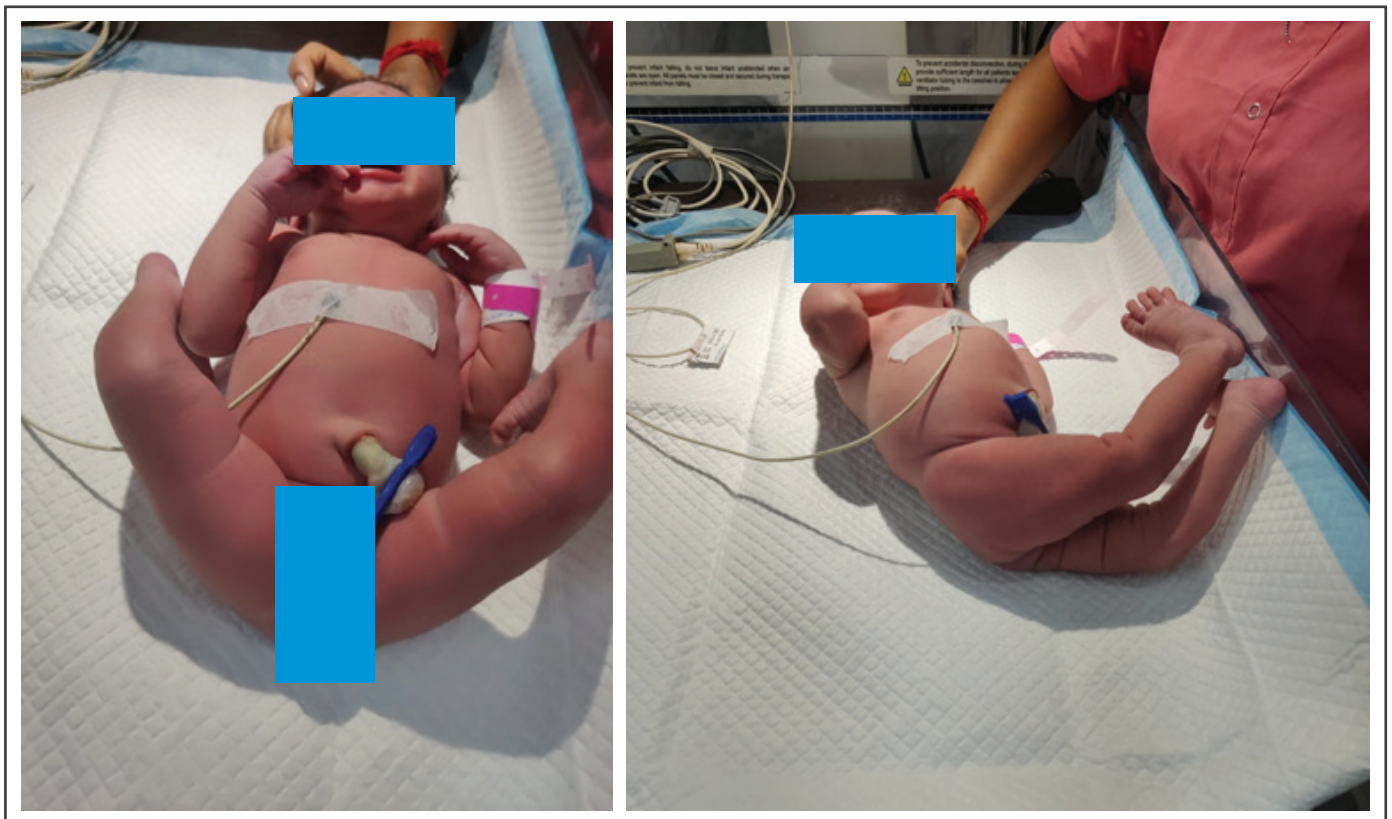
# CASE REPORT: 06

## Successful Management of Congenital Dislocation of the Knee at Birth

Congenital dislocation of the knee (CDK) is a relatively rare condition, with an incidence of 1 in 100,000 live births. It may occur as an isolated deformity or it may be associated with Musculoskeletal disorders, such as DDH and club foot, or it may occur as part of a syndrome such as Arthrogryposis Multiplex Congenital or Hauser syndrome, or it may occur in paralytic conditions such as Meningomyelocele.

Different factors have been considered in the etiology of congenital dislocation of the knee, mainly the hypoplasia of the anterior cruciate ligament or contracture of quadriceps muscles. External factors such as oligohydramnios, breach position or intrauterine constraint, which may contribute to the development of the dislocation of the knee.

The newborn baby was a full-term girl baby born to a second gravida mother with one living issue, delivered by elective caesarean section. The baby was apparently in good clinical condition with an unusual position of both lower limbs and an obvious hyperextended knee (reported as a reverse bent knee). No spontaneous reduction of the deformity or activeness of the knee was noted.





The baby was managed by a two-full limb plaster cast initially, and flexion of both knees of about 15-20\* was achieved. Gradually, flexion was increased to 90\* over 3 months by serial full limb plaster.

In the reported case, dislocation of the knee was associated with bilateral calcaneal valgus deformity, so we hypothesized the deformities were probably caused by intrauterine malposition or dislocation. The baby responded immediately to corrective treatment. After correction, the child did not show any functional impairment, so we did not do a deeper investigation into ligament or muscle disorders.



The most important element of the diagnosis is undoubtedly the inspection of the patient immediately after birth. Hyperextension of the knee is the most obvious thing to detect. The grooves of the anterior skin have been identified as a major prognostic factor. A great number of anterior skin grooves mean a more probable recent in-utero origin of dislocation and a less severe deformity, such as in this case report the baby had less anterior skin groove suggesting long-standing dislocation.

Even though the aspect of congenital dislocation of the knee easily represented a cause of concern in the delivery room. A correct evaluation of deformity at birth, mainly in terms of the isolated syndrome condition, grade of dislocation, and stiffness of the knee, is mandatory to decide the proper treatment that could be conservation or surgical.

**DR.G.SHARAVANAN MBBS, MD (Paed)**  
**PAEDIATRICIAN**



# ADOLESCENT NUTRITION

## FACTS AND FADS

### ADOLESCENCE

Adolescence (ages 11 to 19) is the transition between childhood and adulthood. One of the most dynamic periods of human development is characterized by dramatic physical, cognitive, social, and emotional changes.

These changes, along with adolescents growing independence, search for identity, concern with appearance, need for peer acceptance, and active lifestyle, can significantly affect their eating behaviors and nutrition status.



### Growth And Physical Development

Time for rapid physical growth, and individuals grow faster than at any other age, second only to the growth that occurs in the first year of life. Gain approximately 15-20% of their adult height, 50 percent of their adult body weight, and 40% of their adult skeletal mass.

Adolescents have some of the highest energy, protein, and micronutrient requirements among all age groups.

Nutrition and physical activity are major determinants of adolescents' energy levels and influence growth and body composition.

Inadequate nutrition can delay sexual maturation, slow or stop linear growth, compromise peak bone mass, and make them susceptible to micronutrient deficiencies (particularly iron, calcium, zinc, and vitamin D). Adolescence is the last opportunity for catch-up growth in the life course.



**Health and eating-related behaviours during Adolescence.**

## Factors Affecting Eating Behaviors

- Peer influence/experimenting
- Parental modelling
- Food availability, cost, and preferences
- Personal and cultural beliefs
- Mass media
- Body image

## Adolescent Eating Behavior Issues

- Greater Quest for Independence
- Lack of knowledge and experience necessary to make adequate dietary practice
- There is little time to sit for a meal.
- Snacking and meal skipping are common.
- Eating away from home and fast-food restaurants.
- Consuming soft drinks.
- Eating meals in front of a screen.





## ADOLESCENCE AND MALNUTRITION: FACTS

Adolescents, like children, are affected by the triple burden of undernutrition, obesity, and micronutrient malnutrition.

- More than 50% of adolescents (about 63 million girls and 81 million boys) in the age group 10 to 19 years are either thin, short, overweight, or obese.
- Over 80% are suffering from hidden hunger, a deficiency of one or more micronutrients such as iron, folate, zinc, vitamin B12, and vitamin D.

## WHAT IS A FAD?

A fad, trend, or craze is any form of collective behaviour that develops within a culture, a generation, or a social group in which a group of people enthusiastically follow an impulse for a finite period. Fads are objects or behaviors that achieve short-lived popularity but fade away.

### Oxford Dictionary

A fad diet is any weight-loss plan that promises quick results and is usually a temporary nutritional change.





## DIETING:

- It is an intentional, often temporary, change in eating to achieve weight loss.
- Unhealthy strategies: chronic dieting, fad dieting, fasting, skipping meals, crash diets.
- **Extreme dieting:** self-induced emesis, laxative use, and diet pills
- Major reasons for dieting in adolescents
- Body image dissatisfaction
- Desire to be thinner
- Low self-esteem

## Popular Fad Diets - Health Consequences

### Physical consequences:

- Micronutrient deficiencies (iron, calcium)
- Growth deceleration
- Menstrual irregularities: secondary amenorrhoea.
- Osteopenia, osteoporosis.

### Psychological consequences:

- Dysfunctional eating behavior
- Low self-esteem
- Food preoccupation, tendency to overeat, and binge.
- Disordered eating behaviors.

## WHAT ARE THE BENEFITS OF PHYSICAL ACTIVITY?

- Promotes health, fitness, and self-confidence
- Builds healthy bones and muscles.
- Reduces the risk of developing obesity, type 2 diabetes, and heart disease.
- Reduces anxiety and depression
- Improves concentration, memory, and classroom behavior.

## HOW MUCH PHYSICAL ACTIVITY DO YOUTH NEED?

- At least 60 minutes every day.
- Mostly aerobic
- Add variety and fun.

## Some practical tips: Eat your favorite foods as part of a healthy eating plan.

- Watch the total number of calories that you eat.
- Reduce your portion sizes.
- Find ways to limit calories.
- Prefer baked food instead of fried food.
- Use low-fat milk in place of cream.
- Make half your plate fruits and veggies.

## HEALTHY LIFESTYLE

## UNHEALTHY LIFESTYLE



MORE  
FRUITS



ENOUGH  
SLEEP



ENOUGH  
WATER



WEIGHT  
CONTROL



MORE  
VEGETABLES



REDUCE  
STRESS



SMOKING



SWEETS



ALCOHOL



DRUGS



JUNK  
FOOD



TOO MUCH  
COFFEE

## CONCLUSION

Adolescents need a healthy diet to meet the changing nutritional demands of a growing teen, which prepares them for a lifetime of healthy eating behavior. Eating behavior in this age group is a major determinant of their overall nutritional intake.

Fad diets, fasting meals, and the use of dietary supplements should be avoided to achieve weight loss. Eat a balanced diet that includes a good amount of fruits and vegetables. Try to inculcate some physical activities into your daily routine.

**DR. S. PRIYA PABLO** DNB PAEDIATRICS  
CONSULTANT PAEDIATRICIAN



NEWSWORTHY & NOTEWORTHY

# Egg Freezing Procedure: A Boon for Delayed Motherhood

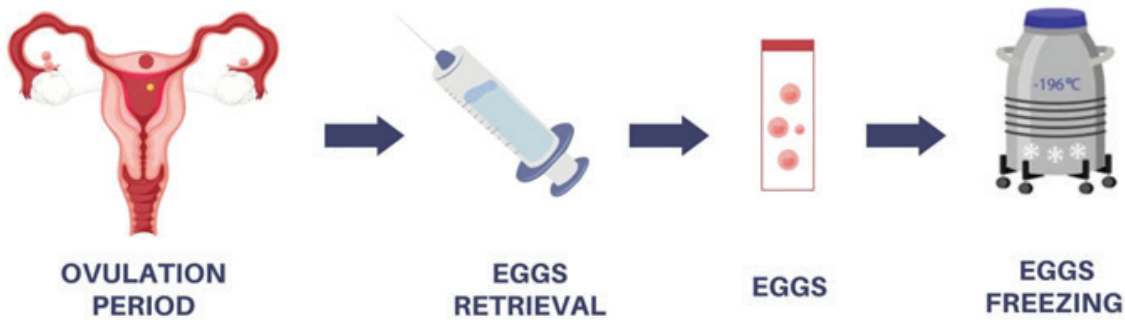
The Biological Clock: Understanding the Limited Fertility Window





# Egg Freezing Beyond Delayed Motherhood: A Ray of Hope for Cancer Survivors

## EGG FREEZING PROCESS



## What are Egg Freezing Benefits?

Egg freezing isn't limited to women planning to delay motherhood. It also serves as a lifeline for cancer patients, especially those undergoing chemotherapy, which can severely deplete ovarian reserve and sperm count. Freezing eggs or sperm before starting treatment allows cancer survivors to pursue parenthood after successfully overcoming the disease.

## Egg Freezing for Marvel Future Possibilities

The global trend of egg freezing is on the rise, offering hope and possibilities for women and couples. Numerous successful pregnancies have been reported using frozen gametes, underscoring the reassuring outcomes of this technology.





# What can Go Wrong with a woman's reproductive system?

The most common problems with the reproductive system involve hormones. A woman's reproductive system involves many hormones that work together in complicated ways. Many different problems can interfere with the hormones, which can result in:

**Delayed puberty**

**Early puberty**

**Irregular menstrual periods**

**No menstrual periods**

**Inability to get pregnant**

**Trouble keeping a pregnancy**

**Many diseases, such as infections and cancer, can affect the reproductive organs.**



# WHAT IS KILLING OUR WOMEN? THINGS TO BE CONSIDERED IMMEDIATELY!



## RECOMMENDED HEALTH TESTS FOR WOMEN

Women's bodies go through a lot of hormonal imbalances during their life. Make regular health screenings a part of your life. Being proactive regarding your health can prevent several health problems. We highly recommend these health tests for women:

### 1. Breast Examination

It is recommended to start your mammograms once you cross 40 years. Early detection ensures better chances of recovery. Complete self-breast self-examination is also recommended every month. Talk to your doctor if you spot anything unusual.

### 2. Pelvic examination

It is always advisable that you visit your Gynaecologist periodically and have a complete pelvic examination and a Pap smear test. Cervical cancer is a leading cause of death among women in India.

### 3. Bone density test

A Bone Density Test helps detect your bone condition. This helps detect osteoporosis.





## 4. Thyroid test

Many women complain of unexplained weight gain, hair loss, brittle nails, and exhaustion. A common reason for this is an underactive thyroid or hypothyroidism which controls the metabolism of the body. Get your thyroid levels checked.

## 5. Vitamin D test

This is a vital nutrient needed for bone growth and maintenance. The most important source of vitamin D is exposure to the sun. As we age, the tendency to synthesise this nutrient decreases.

## 6. Lipid profile tests

This test checks for good and bad cholesterol along with triglycerides and total cholesterol levels. Cholesterol is a fat molecule, which is present in higher levels can get accumulated in the blood vessels and can affect the health of your heart, blood vessels, and brain.

## 7. Blood sugar test

A blood sugar test helps to diagnose diabetes and pre-diabetes. Diabetes has a tremendous impact on a woman's health and has severe long-term complications.

## 8. Cardiac check-up

Get your cardiac check-up done if you have a family history of hypertension, heart disease or if you're overweight, or if you are a smoker.







# 5 FERTILITY MYTHS

## THAT KEEPS WOMEN IN THE DARK ABOUT THEIR REPRODUCTIVE HEALTH

### **Myth #1** *Period blood is impure*

**Fact:** We have heard this myth for ages. Menstruation is a healthy and natural process that is a mark of a healthy woman's body and preps the body for pregnancy. Period blood always welcomed a wide variety of taboos. There is no evidence or science-backed information that supports this myth to date. Period blood does not contain toxins or impurities. Thus, a woman can roam around freely and visit the temples or enter the kitchen during the period.

While you may not ovulate for several months after giving birth, breastfeeding your baby does not prevent the possibility of getting pregnant again. Even if you haven't gotten your period yet after giving birth, you could start ovulating again at any time without knowing it. That means it's possible to get pregnant before your period returns. That being said, it is important to use another form of birth control if you want to avoid getting pregnant while breastfeeding.

### **Myth #2** *You can't get pregnant if you're breastfeeding*





**Myth #3**  
**Overweight and  
underweight women  
cannot get pregnant**

**Fact:** This is one of the most common myths we often hear. "Being overweight and underweight can be contributory factors leading to infertility. But, even these kinds of women tend to conceive naturally and have an uneventful pregnancy outcome,".

**Fact:** Yes, a woman can conceive during her period. A girl, while bleeding, might think that she is on her period, however, it could be bleeding from ovulation. It is the monthly process of the release of an egg from a girl's ovaries.

**Myth #4**  
**It is impossible  
to get pregnant  
on one's period**

**Myth #5**  
**You don't have to  
worry as much about  
heart disease if you're  
a woman**

While it's true that men do have a higher overall risk of heart disease, heart disease is the leading cause of death for women in the United States. Staying healthy and active and monitoring factors that impact heart disease (such as blood sugar, blood pressure, and cholesterol) can help you prevent and/or catch heart disease sooner.



# Glimpse of the 'More Power to Women' Campaign by Billroth Hospitals

Period shouldn't be an apology.  
**Get back your  
cramp-free life!**

**MRP-1800**  
**₹799** Hb, PAP SMEAR,  
USG ABDOMEN

Valid From: 19th December, 2023 to 18th January, 2024

**Find the root cause of your  
Heavy Bleeding & Painful Period**

For Appointments  
Shenoy Nagar: **044-4292 1777** | RA Puram: **044-2464 1111**

**24/7 EMERGENCY SERVICE**  
REGISTRARS TO YOU

Shenoy Nagar: 43, Lakshmi Talkies Road, Chennai - 600030  
R.A. Puram: 52, 2nd Main Road, Chennai - 600028

Billroth Hospitals took a commendable step towards promoting women's health by organizing the 'More Power to Women' campaign in its neighborhood and other prominent locations: Thiru.Vi Ka Park and Shenoy Nagar Park. This initiative was a heartfelt effort to emphasize the significance of women's health and well-being in our society.

The campaign was meticulously designed to offer women a comprehensive understanding of their health status. Central to this initiative was a special screening package, which provided women with access to vital health check-ups. These screenings covered a spectrum of health parameters, ensuring that participants received a holistic assessment of their well-being.

# Billroth Hospital's Medical Camp At Kothari Petrochemicals

On December 22nd, Billroth Hospital organized a comprehensive corporate medical camp at Kothari Petrochemicals, underscoring its commitment to promoting health and well-being within the corporate sector. Recognizing the vital importance of regular health check-ups, especially in high-demand industrial settings, the initiative aimed to empower Kothari Petrochemicals' workforce by providing them with an opportunity to monitor their basic health parameters.



The medical camp witnessed a robust turnout, with skilled healthcare professionals from Billroth Hospital administering a range of diagnostic tests and screenings. Employees were able to undergo essential health assessments, including blood pressure monitoring, cholesterol checks, blood sugar tests, and BMI evaluations. These fundamental screenings serve as crucial indicators of an individual's overall health status, enabling early detection of potential health risks and facilitating timely interventions when necessary. By facilitating easy access to healthcare resources and expert medical guidance, Billroth Hospital's corporate medical camp at Kothari Petrochemicals played a pivotal role in promoting a culture of health awareness and responsibility.

# PERIOD SHOULDN'T BE AN APOLOGY.

*Get back your  
cramp-free life!*

~~MRP-1800~~  
**Rs: 799**

**Hb, PAP SMEAR,  
USG ABDOMEN**  
FREE GYNAEC CONSULTATION



**EMERGENCY CALL**  
**044 4027 4027**

**FOR APPOINTMENTS**

Shenoy Nagar: 044-4292 1777

R. A. Puram: 044-2464 1111

Shenoy Nagar: 43, Lakshmi Talkies Road, Chennai - 600030

R. A. Puram: 52, 2nd Main Road, Chennai - 600028

[www.billrothhospitals.com](http://www.billrothhospitals.com) | Follow us on



**Billroth**  
**Hospitals**