

## A CASE STUDY ON ECTOPIC PREGNANCY

Dr. Nilakshi Pravin Deore\*<sup>1</sup>, Dr. Deepali Suresh Rajput<sup>2</sup>, Dr. Manda Sanjog Ghorpade<sup>3</sup>

<sup>1</sup>PG Scholar, Department of Prasutitantra and Streeroga, Sane Guruji Aarogya Kendra  
Malwadi Hadapsar, Pune 411028.

<sup>2</sup>Guide - MD Prasutitantra Streeroga, Department of Prasutitantra and Streeroga, Sane  
Guruji Aarogya Kendra Malwadi Hadapsar, Pune 411028.

<sup>3</sup>HOD - MS Prasutitantra Streeroga, Department of Prasutitantra and Streeroga, Sane Guruji  
Aarogya Kendra Hadapsar, Pune 411028.

Article Received on  
18 Jan. 2020,

Revised on 07 Feb. 2020,  
Accepted on 28 Feb. 2020,

DOI: 10.20959/wjpr20203-16878

**\*Corresponding Author**

**Dr. Nilakshi Pravin Deore**

PG Scholar, Department of  
Prasutitantra and Streeroga,  
Sane Guruji Aarogya  
Kendra Malwadi Hadapsar,  
Pune 411028.

### ABSTRACT

**Introduction-** Ectopic pregnancy described for the first time in the 11th Century and later on it was described as pregnancy complication. Ectopic pregnancy is potentially life-threatening and remains the leading cause of maternal death. The incidence of ectopic pregnancy is increased during last years all over the world.

**Case presentation-** Here we present a case of recurrent ectopic pregnancy with left adnexal mass and stable general condition was treated with medical management by Methotrexate but finally posted for laparotomy. **Management and outcome-** Though Laparoscopic surgery is still the cornerstone of treatment in the majority of women, medical management is an alternative treatment option. If

the diagnosis of ectopic pregnancy can be made earlier non-invasively, medical treatment with systemic intramuscular Methotrexate (MTX) aimed at reducing mortality, morbidity and reducing costs, minimal intervention/non-intervention on comparing with outcomes of surgical treatment. Fertility can be preserved. **Discussion-** discussion of the case according to the ayurvedic etiopathology is discussed by using nidan panchak.

**KEYWORDS:** Medical management, Ectopic pregnancy.

### 1) INTRODUCTION

An ectopic pregnancy is one in which fertilized ovum is implanted and develops outside the normal endometrial cavity. It refers to the pregnancy occurring outside the uterine

cavity usually in the fallopian tube. In the past ectopic pregnancies were diagnosed at the time of laparoscopy or surgery, often in women who were unaware that they were pregnant. Now with the advent of modern diagnostic aids, a pregnancy can easily be diagnosed even before a menstrual period has been missed. Ectopic pregnancy still contributes significantly to the cause of maternal morbidity and mortality.

**INCIDENCE:** The incidence of ectopic pregnancy among all pregnancies is about 0.25-2.0% worldwide and can occur in any sexually active woman of reproductive age. Ectopic pregnancy was reported in 0.91% of pregnant women (with no maternal deaths) in a study done at tertiary care centre in South India.

While there has been about fourfold increase in the incidence over the couple of decades, but the mortality has been slashed down to 80%.

**AETIOLOGY:** Aetiology includes tubal damage from different reasons like inflammation, infections and surgical interventions.

1. Salpingitis and pelvic inflammatory disease
2. Iatrogenic - contraceptive failure, tubal surgery, intrapelvic adhesions, ART,
3. Others - previous ectopic pregnancy (10-15%), prior induced abortion, developmental defects of tube, transperitoneal migration of ovum.

## CLINICAL FEATURES

### A) SYMPTOMS

ACUTE	UNRUPTURED	SUBACUTE (CHRONIC)
Amenorrhoea	Presence of delayed period with features of pregnancy	Amenorrhoea
Abdominal pain	Uneasiness on one side of the flank which continuous and colicky in nature.	Lower abdominal pain
Vaginal bleeding		Vaginal bleeding
Vomiting		Bladder irritation
Fainting attack		Rectus tenesmus
Shock		

**B) SIGNS**

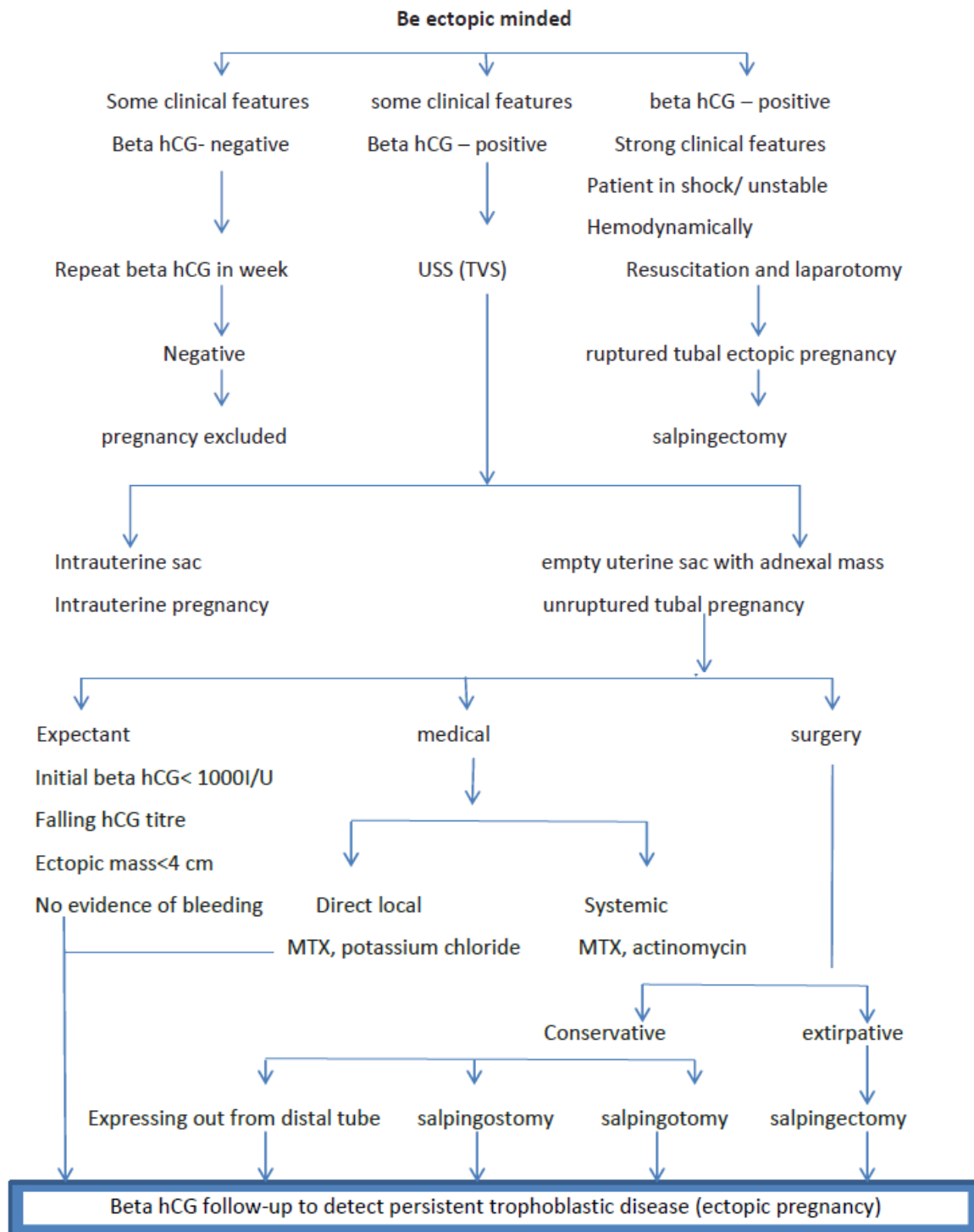
ACUTE	UNRUPTURED	CHRONIC
Patient perspires conscious look blanched	P/V - uterus usually soft showing evidence of pregnancy. A pulsatile small circumscribed tender mass felt through fornix separated from uterus.	Patient looks ill
Severe pallor		Pallor of varying degree
Shock present - pulse rapid and feeble, hypotension, extremities cold and clammy.		Pulse persistently high
P/A - tense , tumid , tender		Features of shock absent
P/S - 1. Vaginal mucosa - blanched white 2. uterus normal in size or slightly bulky 3. extreme tenderness in fornix palpation/ on cervical movement 4. no mass felt , uterus floats as if in water.		P/A - 1. tenderness, 2. mass may be felt in lower abdomen-irregular tender, 3. Cullen sign may be present
		P/S - 1. Vaginal mucosa- pale 2. uterus bulky or normal in size 3. cervical movement tenderness 4. Ill-defined mass boggy felt in posterior fornix.

**DIAGNOSIS**

- (a) History.
- (b) Speculum and bimanual examination.
- (c) Pregnancy test.
- (d) Ultrasonography.
- (e) Test to detect serum  $\beta$ -human chorionic gonadotrophin.
- (f) Laparoscopy.

**MANAGEMENT-** Scheme of management of tubal ectopic pregnancy

- Detailed history, evaluation of high-risk factors and examination.
- Urine- beta hCG.
- Ultrasound scan (transvaginal preferred).



### CASE PRESENTATION

A 32 yrs old female patient presented to OPD of streeroga prasutitantra department of SGAK with the referral note for further management of left ectopic pregnancy with complaints of sudden abdominal pain on 09/09/19.

Married life - 12yrs.

LMP- 28/07/19 with bad obstetric history

**OBSTETRIC HISTORY**

1. G1- PTVD of 6 months baby died after 3 days due to RDS,
2. G2- right ectopic tubal pregnancy was operated and salpingectomy was done in 2013.

PAST HISTORY - no any history of major illness.

FAMILY HISTORY - no any history of major illness.

DRUG ALLERGY - no any drug allergy or food allergy. Now she came with left tubal ectopic pregnancy.

UPT Done - positive and

USG on 09/09/19 suggestive of ET thick 13mm left adnexa - 17 mm thick walled echogenic lesion adjacent to left ovary vascularity present minimal free fluid seen in pelvis, she was hemodynamically stable

**CLINICAL EXAMINATION**

Pulse- 96/min,

BP- 130/80 mm of hg

P/A -abdominal examination revealed lower abdominal tenderness in left iliac region rigidity and guarding present.

P/V- PV examination revealed tenderness in left fornices, tenderness during cervical movement with uterus normal in size.

Patient was admitted and all investigations were done on 09/09/19 beta Hcg - 3557 mIU/ml. patient was stable hemodynamically and in order to preserve tube inj methotrexate was given on 10/09/19. All vitals were monitored on 4<sup>th</sup> day beta Hcg was repeated on 4<sup>th</sup> day which was 9753 mIU/ml and on 7<sup>th</sup> day which was 679.3 mIU/ml which shown reducing values hence patient was discharged and asked for follow-up after a week . Patient came for follow-up after a week with beta hCG report which was (24/09/19) 6302 mIU/ml which was raised, patient gave history of p/v bleeding hence after her menses USG (TVS) and beta hCG was repeated which suggested of 28\*27 mm lesion in left adnexa patient was admitted beta hCG 4320 mIU/ml (01/10/19) and all investigation were done second dose of inj methotrexate was given on 02/10/19. Patient was discharged and asked for regular follow-up after a week patient gave follow-up with beta hCG report (09/10/19) 2526 mIU/ml which was decreased. Later patient's follow-up's were taken weekly beta hCG reports showed declining values, on 15/10/19 - 1404mIU/ml.

On 23/10/19 USG and beta hCG were repeated beta hCG - 900.2 and USG Suggestive of 28\*28 mm mixed echogenic lesion with no large peritoneum as compared to previous USG no significant change in this lesion. Patient was asked to give follow-up after 15 days patient gave follow-up on 08/11/19 with beta hCG- 268.7 and asked for further follow-up after 15 days.

Unfortunately Patient came on 19/11/19 complaining of lower abdominal pain since 2 days increased suddenly on 19/11/19 USG was advised which suggested of increased in size of lesion 48\*51\*41 mm mild echogenicity seen adherent to pelvis is significant hematoma free fluid was significant .hence emergency laparotomy was performed on 19/11/19 and left salpingectomy was performed left adnexal hematoma and hemoperitoneum was noted. Patient was stable and discharged in good condition.

DATE	Beta Hcg	Hgm	Complaints	pulse	Blood pressure	USG	Inj methotrexate
10/09/2019	3557	9.7	Abdominal pain	96	130/80	Echogenic lesion 17mm left tubal ectopic pregnancy	Single dose-100mg deep IM
14/09/2019	9753	-	Mild abdominal pain	98	110/70	-	-
17/09/2019	679.3	10.1	Mild abdominal pain	96	100/60	-	-
24/09/2019	6302	-	No any complaints	88	110/70	-	-
02/10/2019	4320	11.1	Mild abdominal pain	80	110/70	Increased in Echogenic lesion 28*27 mm	Inj methotrexate 100mg deep IM 2 <sup>nd</sup> dose
10/10/2019	2526	-	Mild abdominal pain	88	110/70	-	-
16/10/2019	1404	-	Mild abdominal pain	84	110/70	-	-
23/10/2019	900.2	-	-	88	110/70	Echogenic lesion 28*28 mm, no significant change in this lesion	-
07/11/2019	268.7	11.4	Mild abdominal pain	80	120/70	-	-
19/11/2019		11.8	Pain in abdomen increased	92	130/80	Lesion size Increased 48*51*41 mm S/O left adnexal hematoma significant free fluid in pelvis.	-

## 2) MANAGEMENT AND OUTCOME

Proper evaluation of pregnancy with associated risk factors and early diagnosis help preserving tube and in turns her fertility and thus help in decreasing morbidity and mortality. Hence medical management was done which showed declining result in serum beta Hcg levels but subsequently there was rise in the size of lesion which further needed the surgical intervention.

Ruptured ectopic pregnancy is the leading cause of maternal mortality in the first trimester and accounts for 10-15% of all maternal deaths. The early diagnosis and treatment of this condition over the past two decades have allowed a definitive medical management of unruptured ectopic pregnancy even before there were clinical symptoms in these high risk women. The reason for increasing incidence has not been fully elucidated, but the possible contribution of pelvic inflammatory disease (PID), ovulation inducing drugs, previous abdominal-pelvic surgeries and intra-uterine contraceptive device use has been cited as contributing factors. The diagnosis of ectopic pregnancy has become more frequent during the last decades, but the incidence of ectopic pregnancy rupture has declined. This declined is due to quantitative human chorionic gonadotropin measurements, minimally invasive surgeries, and transvaginal ultrasonography (USG). Early diagnosis reduces the risk of tubal rupture and allows more conservative medical treatments to be employed.

### HENCE TO CONCLUDE WITH

Early diagnosis, proper assessment of principal risk factors and timely intervention in the form of conventional or surgical treatment will help in reducing the morbidity and mortality associated with ectopic pregnancy.

## 3) DISCUSSION

Acharya Charaka has also laid emphasis on the role of Vata in conception. Most of the activities of central, vegetative and peripheral nervous system including the autonomous can be identified with the functions ascribed to Vata. So proper function of Vata here refers to the integrity of neuroendocrine system especially H-P-O-U axis (Hypothalamus-Pituitary-Ovarian-Uterine axis) which is of prime value as far as concept of fertility is concerned. The four factors essential for conception are Ritu, Kshetra, Ambu and Beeja. Here, Kshetra can be taken as the entire female reproductive tract from vagina up to the ovaries and in close association with Hypothalamus and Pituitary gland.



Modern science is based on the Pratyaksha only while Ayurveda does consider the Anumana as well as Aaptopadesha along with the Pratyaksha. Anatomy in both the sciences is totally different from each other and one cannot find an equivocal reference in Ayurvedic texts for various anatomical structures like fallopian tubes. However, some of the Ayurvedic terms which can be equated with Fallopian tubes are Kshetra, Artavavaha Srotas, Shukravaha Srotas in female and Ashaya.

### ***Kshetra***

Fallopian tubes can be considered a part of the Kshetra mentioned by Acharya Sushruta as one of the four elements necessary for conception. Kshetra is a broad term and includes all the structures of the female reproductive tract whose structural and functional integrity is indispensable for conception. But as it clear that female physiology is entirely under the neuroendocrinal control, so it must be concluded that Hypothalamus Pituitary Ovarian axis can also be included in the Kshetra.

### **Artavavaha Srotas**

Understanding of Srotas has always remained the seat of conflicts but its importance and applicability is of enormous importance. If we do not go through the various conflicts and try to understand the Srotas in a simpler way, we will find them as the structural as well as functional units of body. This discussion clarifies that every organ or bodily structure can be included under the umbrella of any of the Srotas. Keeping this view in mind, an attempt has been made to understand the fallopian tubes with the name of Artavavaha Srotas. Artavavaha Srotas is described by Acharya Sushruta, where he says that there are two Artavavaha Srotas, having roots in Garbhashaya and Artavavahi Dhamanis, injury to which causes Vandhyatva (infertility), Maithunasahishnuttva (dyspareunia) and Artavanasha (anovulation or amenorrhoea). Some scholars compare Artavavaha Srotas with uterine arteries, specially their capillary bed, because these arteries are responsible to carry menstrual blood, which is compared to Artava at several places and injuries to these vessels may cause infertility too. This correlation of Artavavaha Srotas with uterine arteries does not seem to be fully acceptable for some reasons.

### **Ashaya**

One more indirect description of fallopian tube can be taken as the extra Ashaya in females told by Acharya Sharngadhara, where he mentions the Garbhashaya as Dhara and the extra Ashaya in females. Here Acharya has considered Garbhashaya as a whole to be the site of



conception by calling it Dhara. But now, it is a well known fact that the actual fertilization takes place in the ampullary region of fallopian tube. So, fallopian tubes can also be accepted as Ashaya. The above discussion tries to bring out the Ayurvedic entities which should be thought of, when we hear the term fallopian tubes. But for the purpose of explaining and interpreting ectopic pregnancy, accepting fallopian tubes as the Artavavaha Srotas appears to be the most appropriate choice.

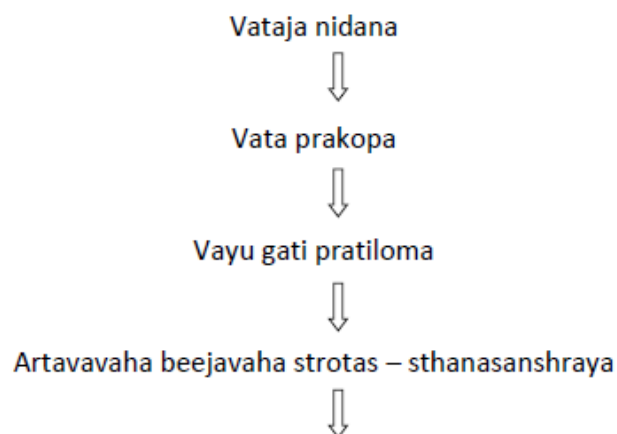
The way to define the disease or the pathogenesis in Ayurveda is entirely different from western medical science, and is based more upon the first vitiation of Doshas, i.e. the pathogenesis of disease from commence. Taking this Ayurvedic view into consideration, an approach can be developed by finding out the ectopic pregnancy on the basis of Nidanam & Samprapti. Acharya Charaka has himself given space to Ayurvedic scholars to understand the newly diagnosed diseases on the basis of Prakriti (Doshas; root cause), Adhishthana (Dushya; seat), Linga (Lakshanas; features) & Ayatana (Ahara Viharadi Nidanam).

### **PRAKRITI (SANNIKRISHTA KARANA OR ROOT CAUSE)**

According to Ayurvedic point of view, the root or ultimate cause of any disease is the vitiation of either one or more of the three Doshas by one or more of their Gunas.

All the three Doshas can be assumed responsible for ectopic pregnancy by causing structural or functional abnormalities in Artava Beeja Vaha Srotas i.e. fallopian tube. Vitiation of Vata can be considered the most important factor.

- **VATA**



Causes deformity in following

- Hair like cilia damage
  - Sperm motility
  - Ovum motility
  - Anatomical defects
- Previous ectopic pregnancy



Garbha garbhanalike madhe sthapit



Ectopic pregnancy

- **PITTA DOSHA**

Pittaj nidana



Pitta dosha with drava sara ushna guna



Along with vata dosha



Dosha vitiates dushya (rakta + mansa)



Reaches the site kha vaigunya with rasavaha raktavaha and artavavaha strotas



Kshubda yoni



PID



Recurrency

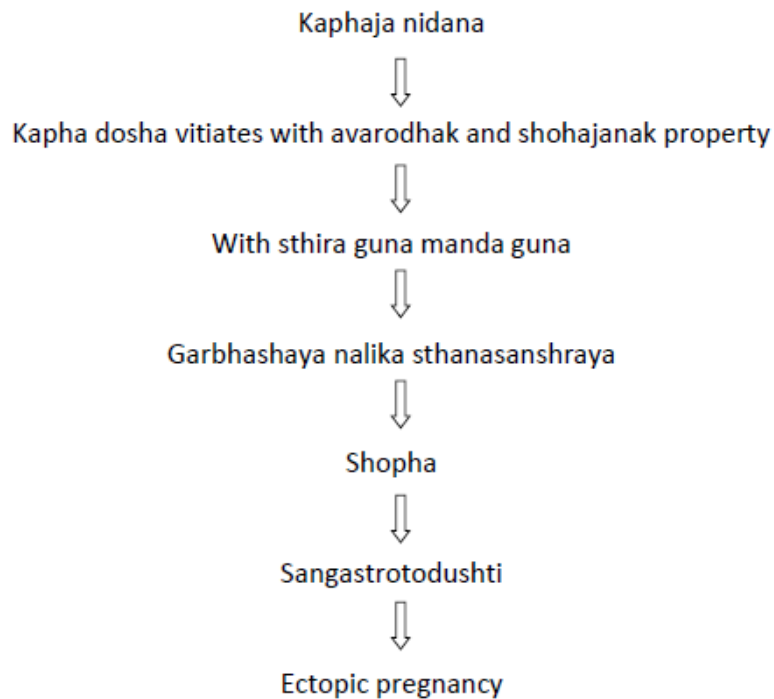


Disturb cilia causes scarring and blockage of tubes



Ectopic pregnancy

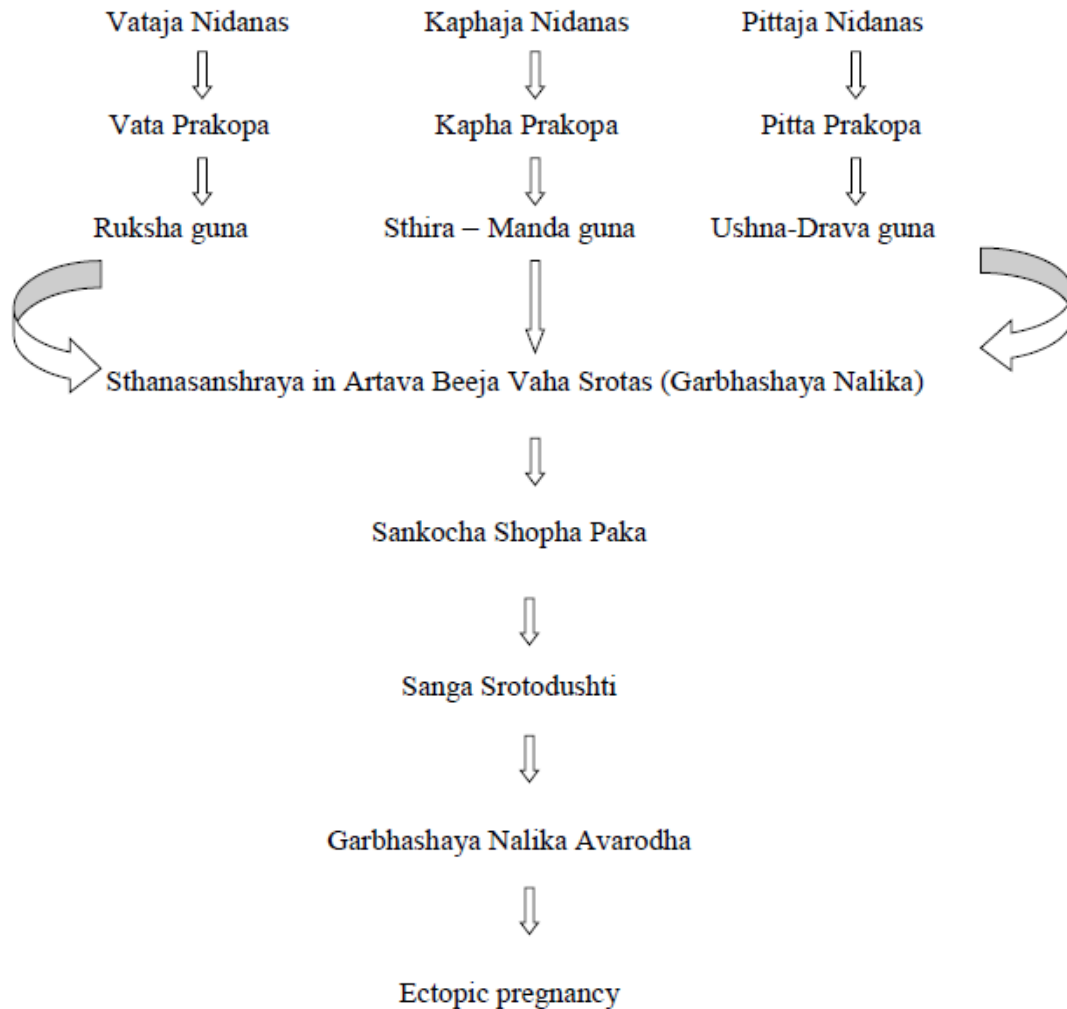
- **KAPHA DOSHA**



All the three Dosha are responsible for ectopic pregnancy. But the role of Vata has certainly an edge over the other two. Narrowing (Samkocha) of tubal lumen is one of the main factors of ectopic pregnancy, and it is because of Vata. It is generated due to pressure difference and moves from the side of more tension to that with lower. In the same way, whenever, the phasic tension of one segment is lesser than the neighboring one, the pressure change between both the segments will make the ovum or conceptus move towards the segment with lower tension. It shows that the role of Vata to propel material inside the tube is important. Whenever, there is any interference in this forward motion of material, it is certainly due the improper functioning of Vata. Also the role of other Dosha cannot be neglected in causing tubal blockage. Kapha has Avarodhaka property which leads to occlusion of tubal lumen. This clarifies the relation of Kapha with tubal block especially when it is more structural than functional. The role of Pitta, either more or less cannot be denied in generation of ectopic due to cilia damage and scarring. Pitta is the main responsible Dosha for Paka, and thus, one of the responsible factors for tubal pregnancy too.

When this patient was observed we examined her we found her of vata pittaj prakruti. Having nidana sevan mostly of vata and pitta dosha also according to her obstetric history her first delivery was preterm and second history of conception was ectopic which clarifies

that there was vitiation of vata dosha when history was taken she mention recurrent lower abdominal pain which can be correlated to PID. Hence by following etiopathogenesis of generation of ectopic pregnancy took place.



### SAMPRAPTI (PATHOGENESIS)

#### Samprapti Ghataka

Dosha : Vatapradhana Tridosha

Dushya : Rasa, Rakta, Artava

Agni : Dhatvagni

Srotas : Artavavaha (Artava-Beeja-vaha)

Udbhavasthana : Pakvashaya

Srotodushti : Sanga

Vyaktisthana : Garbhashaya

Avayava : Garbhashaya-nalika

Roga Vinishchaya : Garbhashayettar garbha dharana

Sadhyasadhyata : Krichchhrasadhya

#### 4) REFERENCES

1. F. Garry Cunningham, Kenneth j. leveno, Steven L. Bloom, Catherine Y. Spong, Jodi S. Dashe, Barbara L. Hoffman, Brian M. Casey, Jeanne S. Sheffield. Williams obstetrics. 24th edition. United states. Mc graw hill education. 2014.
2. Pt. K. N. Shastry & G. N. Chaturvedi, Vidyotini Vyakhya, Charaka Samhita, Chaukhamba Bharati Academy, 2005, Ch. Su. 20/3.
3. Chakrapani commentary on Charaka samhita, Chaukhamba samskrit Samsthana, Varanasi, 1984, Ch.Su. 20/3.
4. Ibid, Vidyotini Vyakhya, Ch. Su. 20/9.
5. Ayurveda-Tattva Samdipika Vyakhya, Sushruta Samhita, 24/9.
6. Pt. Hemraja Sharma, Vidyotini Hindi commentary, Kashyapa Samhita, Chaukhamba Sanskrit Sansthan, Varanasi (2009), Kash. Su. 27/29.
7. Dr. K. H. Krishnamurthy, Bhel Samhita English commentary, Chaukhamba Vishvabharti, Varanasi, Sharir Sthana 2000,12/7.
8. Ibid, Vidyotini Vyakhya, Ch. Su. 12/4.
9. Ibid, Chak. Commentary on Ch. Su. 12/4.
10. Ibid, Vidyotini Vyakhya, Ch. Su. 1/61.
11. Ibid, Ayurveda-Tattva-Samdipika vyakhya, Su. Su. 17/12.
12. Ibid, Ayurvedic concepts of gynaecology, pg. 99.