



## STUDY OF CORRELATION BETWEEN AYURVEDIC CONCEPT OF KSHETRA AS GARBHSAMBHAV SAMUGRI & MODERN CONCEPT OF ENDOMETRIUM

### Ayurveda

**Dr. Harsha Gambhire – Bhadugale**

M.D. Ayurved – Rachana Sharir, H.O.D., Department of Rachana Sharir, Sai Ayurved College, Hospital & Research Centre, Vairag, Solapur, Ph.D. Scholar, Dept. of Rachana Sharir, COA, BVDU, Pune 43.

**Dr. Uday B. Bhoir\***

Ph.D. Ayurved – Rachana Sharir, Associate Professor, Dept. of Rachana Sharir, COA, BVDU, Pune 43. \*Corresponding Author

### ABSTRACT

**Background:** According to Ayurveda, as in nature good season, farm (fertile land), water & seed together gives rise to the sprout in the same way in human being for the formation of embryo these very four factors are equally essential.

The term Ritu means fertile period in a woman., Ambu means proper nutrition through mother and Beej means shukra (sperm) & shonit (ovum). According to Ayurveda Kshetra means the place where beej implants and from modern point of view fertilized ovum implants itself in the endometrium of the uterus.

Purpose of this study is to find correlation between Ayurvedic Concept of Kshetra & Modern Concept of Endometrium.

**Materials and Methods:** Anonymous data about endometrial features of women will be collected from gynecologists.

**Conclusion:** The study will reveal whether there is a correlation between ayurvedic concept of kshetra as garbhsambhav samugri & modern concept of endometrium.

### KEYWORDS

Kshetra, Garbhsambhav samugri, Endometrium.

### INTRODUCTION

ध्रुवं चतुर्णां सान्निध्याद्गर्भः स्याद्विधिपूर्वकः ॥  
ऋतुक्षेत्राम्बुबीजानां सामग्र्यादङ्कुरो यथा ॥ सु. शा. २/३५ ॥<sup>[1]</sup>

According to Sushruta, as in nature, good season, farm (fertile land), water & seed together gives rise to the sprout, In the same way, in human beings, these very four factors are equally essential for the formation of embryo.

The term Ritu means fertile period in a woman. Kshetra means female reproductive organs, Ambu means proper nutrition through mother and beej means shukra (sperm) & shonit (ovum).

Kshetra (Fertile Land) - Out of above four factors our Acharya describes Kshetra as follows

क्षेत्र – शेत

पत्न्याः देह (अमरकोष २ रा खण्ड तृतीय काण्ड २६९५ क्र. श्लोक)<sup>[2]</sup>

The word kshetra means farm and it also means patni deha (wife's body)

क्षेत्रमिव क्षेत्रं, तत्र शुकुरूपबीजप्ररोहनात् ॥ (च. चि. २/१/४ चक्रपाणिदत्त टिका)<sup>[3]</sup>

Streedeha resembles as farm because the beej implants there.

क्षेत्रभूता स्मृता नारी बीजभूतः स्मृतः पुमान् । बीजक्षेत्रसमायोगात् संभवः सर्वदेहिनाम् ॥ मनुस्मृती ९/३३<sup>[4]</sup>

Women is Kshetrarupa and male is Beejrupa. Kshetra Beej sanyog results in the creation of all beings.

पुरुषस्यानुपहतेरेतसः स्त्रियाश्चाप्रदुष्टयोनिशोणितगर्भाशयाया यदा भवति संसर्गः ऋतुकाले, यदा चानयोस्तथायुक्ते

संसर्गं शुकुरोणितसंसर्गमन्तर्गर्भाशयगतं जीवोऽवक्रामति सत्त्वसंप्रयोगात्तदा गर्भोऽभिनिर्वर्तते ॥ च. शा. ३/३ ॥<sup>[5]</sup>

Healthy shukra passing through healthy yoni reaches healthy garbhashaya and gets mixed with healthy shonita during ritukala, and the spirit descends by the agency of the mind into that union, then garbha is formed which implants in antragarbhasaya.

From above references it is clear that from Ayurvedic point of view the term Kshetra is used grossly for Women but specifically used for

Garbhashaya (Uterus).

### Garbhashaya

आशयास्तु ..... - स्त्रीणां गर्भाशयोऽष्टम इति ॥ सु. शा. ५/८ ॥<sup>[1]</sup>

Women have one extra eighth asaya (place of residence) as garbhashaya (seat of foetus).

स्त्रीणां तु बस्तिपार्श्वगतो गर्भाशयः सन्निकृष्टः ॥ सु. चि. ७/३३ ॥<sup>[1]</sup>

In women the garbhashaya is situated by the side of the urinary bladder.

पित्तपक्वाशययोर्मध्ये गर्भशय्याः यत्र गर्भस्तिष्ठति ॥ सु. शा. ५/५१ ॥<sup>[1]</sup>

Garbhashaya (bed or place of dwelling of the foetus or fundus of the uterus) is situated in between pittasaya and pakwasaya.

शङ्खनाभ्याकृतिर्योनिस्त्रयावर्ता सा प्रकीर्तिता ॥ तस्यास्तृतीये त्वावर्ते गर्भशय्या प्रतिष्ठिता ॥ सु. शा. ५/५५ ॥<sup>[1]</sup>

Yoni resembles to spirals of sankha (conch shell) having three spirals, in its third spiral (innermost) lies garbhashaya (seat of foetus or fundus of uterus).

### Modern View

According to modern science embryo develops & grows in the uterus. The uterus is a hollow muscular organ located in the female pelvis between the bladder and rectum. The ovaries produce ovum that travel through the fallopian tubes.<sup>[7]</sup> Once the ovum has left the ovary it can be fertilized in the fallopian tube and implant itself in the endometrium of the uterus.<sup>[8]</sup>

### Walls of body of Uterus

The body of uterus has three layers, which together form the uterine wall. From innermost to outermost, these layers are the endometrium, myometrium, and perimetrium.

The endometrium is the lining epithelium of the uterine cavity above the level of internal os.

It shows two distinct divisions as follows

The Basal Zone (stratum basalis) lies in contact with myometrium of the uterus. This layer serves as an anchor for the endometrium within the uterus and stays relatively unchanged.

The superficial functional zone is dynamic, it changes in response to the monthly flux of hormones that guide the menstrual cycle. For this reason, it's called the stratum functionalis, or functional layer. It's the

part of the endometrium where a fertilized ovum (or blastocyst) will implant if conception takes place.<sup>[9]</sup>

**Menstruation and Pregnancy**

The purpose of menstrual cycle is to prepare the endometrium for reception of fertilized ovum.

Secretory phase: After ovulation the endometrium becomes soft and oedematous, because of the fluid secreted by the uterine glands. During the secretory phase, the arteries supplying the superficial functional zone of the endometrium become very tortuous, and are called spiral arteries. The arteries to the basal zone of the endometrium remain straight and short. Towards the end of the secretory phase the endometrium is thick, soft, and richly supplied with blood. The secretory activity of the uterine glands not only makes the endometrium soft, but also provides nutrition to the embryo. These changes are, therefore, an obvious preparation for providing a suitable environment for the fertilized ovum, when it reaches the uterus.<sup>[8]</sup>

According to Ayurveda Garbhasaya (uterus) is called as Kshetra because the Beej implants there. From modern point of view fertilized ovum implants itself in the endometrium of the uterus.

Purpose of this study is to find correlation between Ayurvedic Concept of Kshetra & Modern Concept of Endometrium.

**Review of Previous work**

**Previous work done**

1. A clinical study on uttarbasti of bhrihat shatavari ghrita and baladi churna in the management of female infertility w.s.r. to Endometrial Receptivity. Journal of ayurveda and interrated medical sciences (ISSN 2456 - 3110) Vol 2 issue 1 Jan-Feb 2017, Pg. 7-14 DOI: <https://doi.org/10.21760/jaims.v2i1.7480>, Anjali Verma, Kamini Dhiman, Sarvesh Kumar.  
This study concludes that Bhrihat Shatavari Ghrita Uttar Basti combined with Baladi Churna oral overall can be a better choice in improving endometrial receptivity in cases of female infertility.
2. Sop for uttarbasti i.e. uterine detox therapy of ayurveda w.s.r. to infertility with implantation defects IAMJ: Volume 4; Issue 03; March – 2016 ISSN: 2320 5091, Pg. 549-552, Deshmukh Sushilkumar, Deshmukh Pranita Joshi.  
This study concludes that uttarbasti i.e. uterine detox therapy is beneficial in treatments of infertility due to implantation defects.
3. Efficacy of Laghu Malini Vasant In Luteal Phase Defect, International Journal of Innovative Research and Advanced Studies (IJIRAS) Volume 5 Issue 2, February 2018 (ISSN: 2394-4404), Pg. 328-333, Patil Deepali, Mohite Swati S.

This study concludes that Laghumalinivasant oral intake increases the endometrial thickness, serum progesterone levels and ovulation.

**Review of Literature**

In all above literature it is concluded that, concept of garbha sambhav samugri in ayurveda is to bring healthy offspring into society, but independent work on concept of kshetra is not found anywhere.

**Table 1. Format of collected data**

Patients	Age	# Conception Attempt	Is stimulated cycle	Endometrial Features						Implanted/ Non - Implanted		
				Thickness in mm							Pattern	Vascularity
				10 <sup>th</sup> Day	12 <sup>th</sup> Day	14 <sup>th</sup> Day	16 <sup>th</sup> Day	18 <sup>th</sup> Day	21 <sup>th</sup> Day			
1												
2												
3												
4												

**Endometrial Pattern**

**Pattern A** - a trilaminar pattern consisting of a central hyperechoic line surround by two hypoechoic layers

**Pattern B** - a pattern consisting an intermediate isoechogenic pattern with the same reflectivity as the surrounding myometrium and a poorly defined central echogenic line.

Gynecologists have started treating infertility by improving endometrial receptivity by different treatments, like oral medicine and uttarbasti, considering endometrium as essential factor for implantation of fertilized ovum. As any defect in it will lead to implantation failure.

**Need of Research**

As we seen the previous work done , it seems that most of the work done is carried out on Ritu, Ambu, Beej as Garbh sambhav Samugri, Study of Endometrium as Kshetra will be beneficial for starting early treatment for conception in most likely to be infertile women.

Kshetra is one of the four basic factors for good pregnancy. For good pregnancy Kshetra should be avyapat (Healthy) like avyapat yoni and garbhasaya described by charak.<sup>[5]</sup> Yoni, Garbhasaya comprises Kshetra.

Vyapat (Unhealthy) kshetra results into vandhyatva (Infertility) like garbhsrava (Abortion), garbhpat (Abortion), anaptayta (childlessness), mruta garbh(still birth)<sup>[1,5,6]</sup>.

This study has critical importance to understand the reasons for infertility due to Kshetra and develop new techniques for its treatment within medicine.

This study will give useful information about relation between endometrial thickness and implantation for Assisted Reproductive Technology like Intrauterine Insemination (IUI), In-Vitro Fertilization(IVF).

**Aim & Objectives**

**Aim**

Study of correlation between Ayurvedic Concept of Kshetra as Garbhsambhav Samugri & Modern Concept of Endometrium.

**Objectives**

To Study how various Endometrial features affects implantation of fertilised ovum.

**Material & Methodology**

**Material**

Information sheet for the collection of the concern data.

**Methodology**

- Anonymous data about Endometrial features of women willing to conceive using transvaginal ultrasound during day 10 - 21 of menstrual cycle and data of whether implanted or not implanted women will be collected from gynecologists.
- From this data we will find records with non-implanted women and prepare percentage distribution with respect to endometrial features.
- Then the graphs of % of non-implanted women vs conception attempt for each endometrial features will be prepared. This will enable us to find correlation between endometrial features and implantation.

**Pattern C** - a pattern consisting homogenous, hyperechogenic endometrium

**Endometrial Vascularity Zone**

**V1** – Zone 1. Myometrium surrounding the endometrium.

**V2** – Zone 2. Hyperechoic endometrial edge.

**V3** – Zone 3. Internal endometrial hypoechoic zone.

**V4** – Zone 4. Endometrial cavity

**Table 2. % Distribution Table for Endometrial Thickness**

Sr. No.	# Conception Attempt	% of Non-Implanted Women	% Distribution of Non - Implanted Women w.r.t. Endometrial Thickness in mm.								
			<7	7	8	9	10	11	12	>12	
1											
2											
3											
4											

**Table 3. % Distribution Table for Endometrial Pattern**

Sr. No.	# Conception Attempt	% of Non-Implanted Women	Endometrial Pattern		
			A	B	C
1					
2					
3					

**Table 4. % Distribution Table for Endometrial Vascularity**

Sr. No.	# Conception Attempt	% of Non-Implanted Women	Endometrial Vascularity			
			V1	V2	V3	V4
1						
2						
3						

**Study design** – Observational study.

**Sample Size** - 160

- **Inclusion criteria**
- Married Women
- Age between 20 and 30 years
- Women having normal and regular menses.

#### **Exclusion criteria**

- Women having abnormal Uterine Cavity
- Partner having semen abnormality

#### **CONCLUSION**

On the basis of results, discussion and statistical analysis, appropriate conclusion will be drawn. The study will reveal whether there is a correlation between ayurvedic concept of kshetra as garbhsambhav samagri & modern concept of endometrium.

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