

A CLINICAL STUDY TO EVALUATE THE EFFICACY OF TILABHARANGYADI KWATHA YOGA ON ENDOMETRIAL THICKNESS

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ABSTRACT

Endometrium acts as the wallpaper of the uterine cavity which is influenced by the steroid hormones. Menstruation marks the shedding of this layer which grows during the secretory phase of the menstrual cycle and makes it ready for the implantation process. The endometrium helps maintain the pregnancy by forming a 3 layered stroma. This endometrium helps in the implantation of the embryo and its further growth throughout its intra uterine stay. So an improper endometrium gives rise to loss of receptiveness and improper nourishment to fetus.^[1] The tridoshas are equally responsible for this defect with a major cause with the vitiated kapha. The kapha that gets vitiated does avarana to the vitiated vata dosha. This vata that traverses

through the srotases caused srotorodha due to its avarana caused by kapha and thus the rasa carried through these srotases into the garbhasaya will get clogged and will not reach the garbhasaya. As the rasa does not reach the garbhasaya the nourishment factor becomes poor. The drugs in the medicine are having kapha - vata hara property capable of removing the vitiated kapha and remove the avarana thus correcting the srotas and vata favouring the growth of endometrium. The medicine that was used for the study is tilabharangyadi kwatha mentioned in the raktagulma chikitsa in ashtanga hridaya chikitsa sthana.^[2]

KEYWORDS: Endometrium, tilabharangyadi kwatha, avarana.

INTRODUCTION

Endometrial layer is the inner layer which undergoes cyclic changes which are completely governed by the hormones. The process of implantation of the blastocyst into the decidua (pregnant endometrium) is a subtle dialogue between the mother and the fetus. Implantation being a dynamic process has always been a cause for a majority of unexplained infertility. The reduced endometrial thickness in turn reduces receptivity. Endometrial thickness is common but yet a nightmare in the field of infertility. The thickened endometrium provides the site for the implantation of the blastocyst. The endometrium undergoes very precise morphological changes till the receptivity stage is developed. the endometrium that forms into 3 layers of decidual layer helps in the implantation. This endometrium acts as the source of blood supply and nutrition during the first few weeks of pregnancy until the placenta gets formed. The hormonal relation with endometrium is accessed through the HPO axis. Estrogen is the extreme vital hormone that maintains the endometrial thickness. Reduced endometrium will have reduced receptivity resulting in reduced blood vessels supplying it, causing hinderance in implantation and maintenance of the embryo. Kshetra is one of the entities in the formation of a healthy garbha and endometrium being a part of the kshetra where the implantation occurs. Kapha dosha made up of prithvi and jala has the property of nourishment and maintaining the stability.^[3] Hence avikrita kapha dosha is needed for the formation of the endometrial layer preparing for the implantation.

OBJECTIVES

- ☐ To evaluate the efficacy of tilabharangyadi kwatha yoga in increasing the endometrial thickness.

Hypothesis

- ☐ H0 - Trial drug has no effect on endometrial thickness.
- ☐ H1 - Trial drug is effective on endometrial thickness.

MATERIALS AND METHODS

Source of data

A group of 20 patients suffering from reduced endometrial thickness, fulfilling the diagnostic criteria were randomly selected for the study among the patients attending the OPD of Prasuti Tantra and Stree roga Department, S.D.M.C.A Hospital, Udupi.

Method of Collection

1. Selected patients having amenorrhea, oligomenorrhea, infertility and reduced endometrium are taken.
2. The data will be collected by interrogation and by USG
3. All the patients will be given the same medication internally and changes will be noted according to the assessment criteria.
4. A special proforma will be prepared with all the points of history taking, personal history, USG and patients will be analyzed and selected accordingly.

Inclusion criteria

- Age between 18 - 35 years
- Presenting with amenorrhea
- Patients with oligomenorrhea

Exclusion criteria

- Systemic diseases
- HIV and other STD's
- Premature ovarian failure

Intervention

Study group - One group and all the patients will be given Tilabharangyadi kwatha

Dose - Tila kwatha - 50 ml, prakshepa choorna - 6 grams, Guda - 12 grams, Go- Ghritha - 12 grams

Route of Administration - Oral

Time of administration - Twice daily after food

CRITERIA FOR ASSESSMENT**Subjective parameters**

1. Oligomenorrhea
2. Amenorrhea

Objective parameters

1. Endometrial thickness

Final Assessment

Cured – endometrial thickness was found to be above 10 mm

Improved – endometrial thickness was found to be between 7-10

No relief – endometrial thickness remained the same or <7

OBSERVATION AND RESULTS

Among the 20 patients who were taken up for the study around 80% of the patients had an increase in the endometrial thickness and it was noted to be statistically significant results. The four patients with anovulation who got conceived had thin endometrium of almost 6-7 mm. Hence the trial drug also showed significant results in increasing the endometrial thickness too.

Effect of Drug on Endometrial Thickness

	MEAN	S.D	S.E.M	M.D	% change	T	P	Interpretation
BT	8.25	2.46	0.55	0.865	10.48	-2.958	0.008	S
AT	9.11	2.71	0.60					

Mean score of BMI before treatment was 8.25 and after treatment was 9.11 with 10.48% increase, which is statistically significant (P value 0.008).

DISCUSSION AND SUMMARAY

Endometrial formation is a part of the complex sequel of uterine cycle. During the proliferative phase of menstrual cycle the i.e during ritu kala (ovulatory phase) – this phase is characterised by the proliferation of endometrium followed by ovulation. This period will occur for 12 days^[6] (a.h.sa 1/27) and is the most favourable time for conception. During this period the yoni mukha will be opened.^[7] (su.sa.saa 3/9) Since there occurs the reconstruction of the tissues, the bouthika components predominant will be prithvi and jala bhuta which are the components of kapha. Hence ritu kala is marked by the predominance of kapha dosha. The seed that is sown during this period will lead into fruit.(Nishiktasya beejasya phala prasavanuguna: kaala – indu commentary) this is because of the replenished endometrial layer is in a receptive character promoting the implantation and further growth of the fetus. Hence it can be understood that during ritukala when there is appearance of pushpa, and a fully replenished endometrial layers helps in the formation of pregnancy if fertilisation occurs and will help in intra uterine growth of fetus.

Formation of endometrium is a process where in rasa, rakta dhatu along with the agni and srotases are involved. The three dosha directly or indirectly are involved in the process of endometrial formation. Vata for the division of cells and for the formation of the spiral arteries. Pitta leads the role by helping in the process of formation of endometrial layer and in the nourishment. Kapha helps in providing the soumya guna and enhancing the quality of the endometrium.^[5]

When there is an imbalance to all the factors bounded for the formation of endometrium, a condition arises where in improper formation of the layers, which is understood as thin endometrium. It is where in the endometrium becomes incapable of implantation or decidual formation. This improper formation of endometrium can be due to the avarana caused by kapha over the vata. This avarana can lead to sroto rodhana i.e artava vaha sroto rotha and hinders the formation of the layer and the production of spiral arteries.

The Probable mode of action of each drug in the tilabharangyadi kwatha yoga can be explained as - Tila is the major and foremost drug used in the preparation. It is having madhura rasa and kashaya and tikta anurasa. The madhura rasa favours in balancing the vata and pitta which is needed, as the doshas act on the samprapti ghatakas and the dhatus are not formed properly. With its ushna veerya property it increases and improves the agni both jatharagni and dhatwagni and helps in the pachana of ahara rasa as well as dhatu parinama. Chiefly acts as vata shamaka but wholly as tridosha shamaka. Fundamentally tila is having the major property of artavajanana and vajeekarana property and also as agni vardhaka and rasayana, all these acts on improving the endometrial quality. Agnivardhaka property can balance the pitta and helps in improving the agni, so that the process of formation of dhatu or dhatu vardhana property will be very well carried out, thereby increasing the thickness and receptivity of the endometrial layer. Agnivardhana can also help in releasing the kapha avarana and also clears the srotorodhana. The apana vayu, having the major role in the garbhashaya is effected by the kapha dosha.^[4] Kapha dosha gets avrita over vata and decreases its functional capacity. The agnivardhaka property of tila may help remove the avarana of kapha over vata and release the apana vayu. Hence tila is the best option in the ingredients mitigating nashtapushpa.

Next most important ingredient in tilabharangyadi kwatha yoga is the bharangi. The katu rasa of bharangi acts as a kleda kara swabhava hence lekhana of the kapha can occur. It also helps in soshana of the medas. Having deepana and pachana property is a boon to erase the

agnimandya. It also helps in eradicating sroto rodhana. With the tikta rasa it will do shoshana of the kleda, medas and vasa, and pacifies kapha.

Vyosha – sunti, maricha and pippali - In total the three dravyas has the power of lekhana and thus to remove the vitiated kapha that is lodged in the srotas and causing sroto rodhana. The drugs are also agni vardhaka hence it will increase the pitta. The vyosha trya are katu rasa pradhana, the katu rasa helps in mitigating alasaka where in the ahara rasa will be properly digested and gets transformed into rasa dhatu. Katu rasa can also decrease snehana, kledana and medas whereby the vitiation caused by the kapha dosha can be decreased. The excess medas can be regulated by this property. It also helps in clearing sroto rodhana and deepan and pachana. They are also having laghu and theekshana gunas which can help in reducing the kledana and avarana swabhava of kapha.

Thus the medicine acts in mitigating the sroto rodhana by correcting the vitiated kapha and the avrita vata and stabilizing the pitta thereby creating a prone environment for the growth and restoration of a healthy endometrium.

CONCLUSION

The study was conducted on 20 patients and it was found to be statistically significant with around 80% of the patients having an increased endometrial thickness and 4 subjects conceived. Thus it can be concluded that the drug tila bharangyadi kwatha yoga has got a very effective result in increasing the endometrial thickness.

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