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# A COMPARATIVE STUDY OF KASERUKADI YOGA IN THE MANAGEMENT OF THREATENED ABORTION

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## ABSTRACT

Threatened abortion is the most common complication of pregnancy. Current research suggests that some 30% to 60% of fertilized embryo's naturally failed to implant, of these that do implant, about 25% suffer early pregnancy loss by the 6th week of LMP. The clinical diagnosis or bleeding appears through a closed cervical Os during the first half of pregnancy. The bleeding in threatened abortion is mild to moderate and further it may progress to incomplete or complete abortion. *Ayurveda* has respectable status among all systems of medicine and is considered to be the most perfect and suitable system of medicine.

**Aim & Objectives**: To compare the efficacy of *Kaserukadi Yoga* with Natural micronized progesterone in the management of Threatened Abortion.

**Material and Methods:** Total 40 patients of Threatened abortion & were studied by randomly dividing into two groups and fulfilling the inclusion criteria were selected for this study, from *Deptt. Of Stree roga and Prasuti tantra* O.P.D.

**Result:** The total efficacy of drug was evaluated on the basis of sign and symptoms after completion of therapy. Overall effect of therapy in Trial group 1 showed 7.14% patients had improved and 85.71 % patients had complete remission and 7.14% had unimproved for their sign and symptoms. In group 2, 16.66% patients had improved, 83.33% patients had complete remission and none of the patient showed an improvement for their sign and symptoms.

**Discussion - Conclusion** in symptomatic parameters were better in Trial group 2 and reduction in associated symptomatic parameters were better in Trial group 1. Hence, it showed Trial group I gave equally good results on Threatened abortion with comparison of Natural Micronized Progesterone. As, associated symptoms may aggregate the symptoms of Threatened abortion.

**Keywords:** Threatened abortion, Natural Micronized Progesterone, *Kaserukadi Payah, Garbhsaravhar Yoga*

## INTRODUCTION

The desire to have a healthy progeny is innate and very tense in every living being. The hectic life and tremendous stress in today's world has made conception and continuation of pregnancy to term very difficult. As such most of the responsibility to carryout pregnancy successful is held by female. She has to protect, nourish and care for each and every need of the growing fetus. In the "*Vajikar Adhyaya"* itself Acharya *Charak* mentions that, for a healthy progeny, man of perfect health should approach such a woman, who is of a different clan, who is free from ill health, who has taken her post menstrual purification bath, who is cheerful and responsible. All those factors which hamper the phenomena of begetting a healthy child are said to cause a barrier in a woman's completeness.[1] In *Yogratnakar, Bhaisajya Ratnawali, Acharya Charak and Acharya Vagbhatt* explained various *Madhur, Sheeta Dravya Pradhan* formulations for the stability of fetus.[2] *Acharya Charak* explained that if due to use of non- congenial diet and mode of life, bleeding occurs in second or third month, the fetus is not retained because upto this period it is "*Ajatsaar*".[3] But he explained treatment should be started immediately after the evidence of "*pushpadarshan*" (bleeding per vaginum) by these formulations abortion can be prevented. Present clinical study can be systematically elaborated under the following major headings:

**Selection and Preparation of the Drug:** The need of the present research work was to find effective and safe *ayurvedic* formulations for threatened abortion. All the drugs used in the treatment of threatened abortion had antiabortificant properties, like *Tridoshamak, Sheetveerya,* Haemostatic, antioxidant, immunomodulatory etc. The contents of the drug (listed in table no. 1,2) were purchased and prepared by the pharmacy of the research institute.

**Table 1:** Ingredient of Trial drug "*Kaserukadi Payah*[4]

| Sr.no. | Name of Herb | Latin name | Parts used | Part |
|---|---|---|---|---|
| 1 | *Kaseruka* | *Scirpua kysoor(Roxb.)* | *Kand* | 1Part |
| 2 | *Shringatak* | *Trapa natans(Linn.)* | *Phalamajja* | 1Part |
| 3 | *Padmak* | *Prunus cerasoids(D.Don)* | *Twak* | 1Part |
| 4 | *Mudugparni* | *Phaselous trilobus(Ait.)* | *Panchang* | 1Part |
| 5 | *Madhuka* | *Glycerrhiza glabra (Linn.)* | *Moola* | 1Part |
| 6 | Sugar | | | 1Part |

**Table 2:** Ingredient of Trial drug "*Garbhsravahara Yoga"* [5]

| Sr.no. | *Name* | *Latin name* | Parts used | Ratio |
|---|---|---|---|---|
| 1 | *Lajjalu* | *Mimosa pudica (Linn.)* | *Panchang* | 1Part |
| 2 | *Dhatakipushpa* | *Woodfordia Fruticosa(Kurz.)* | *Pushpa* | 1 Part |
| 3 | *Uttpal* | *Nymphoea stellate (Willd.)* | *Beeja* | 1Part |
| 4 | *Lodhra* | *Symplocos racemosa(Roxb.)* | *Twak* | 1Part |
| 5 | Honey | | | 1Part |

**Method of Data Collection-**

40 clinically diagnosed patients of threatened abortion were selected, who fulfilling the inclusion criteria, divided into two groups of 20 patients each (based on a prepared Performa) as shown in Table no. 3. Group I were administered *Kaserukadi Payah*[6] in a dose of 100ml twice daily & *Garbhsaravhar Yoga*[7] in a dose of 3gm BD with milk for 45 days. In group II – Natural Micronized Progesterone 200mg by oral administration with water twice daily. The patients treated in trial groups were assessed by presence or absence of signs and symptoms before and after treatment. Symptomatic relief obtained by the treatment given was assessed periodically after every 15 days of initial scoring till the completion of treatment. Results were noted on the basis of clinical improvement.

Group I: The duration of trial was upto 45 days and the patients were assessed fortnightly.

Group II: The duration of group II was same as that of Group I.

Follow-ups: After completion of trial for consecutive 1 month at the interval of 15 days.

**Table 3:** Posology of the drug "*Kaserukadi Payah" and "Garbhsravahara Yoga"*

| Name of drug | Dose time & Route of administration | Anupan |
|---|---|---|
| *Kaserukadi Payah* | 100ml BD /Orally | *Milk* |
| *Garbhasaravhar Yoga* | *3gm* BD / Orally | *Milk* |

**Inclusion & Exclusion Criteria**

Diagnosed and confirmed case of threatened abortion presenting with bleeding per vaginum between the age group of 20-35 years who were willing to sign the consent form for clinical trial with gestational age upto 20 weeks. Gynecological problems: cervical ectopy, polyp or carcinoma associated with pregnancy. blighted ovum, missed/inevitable/septic abortion. Serious illness malignancy, hypertension, diabetes mellitus associated with pregnancy were not included in the research work.

**Ethical Clearance**

Ethical clearance for conducting of the clinical trial involving human subjects was taken from the IEC before the commencement of the trial (No.Ayu/IEC/2017/1174).

**Patient's Consent**

The details of the research work to be conducted along with their role in the same were explained to each and every patient in their local language and then a written consent was taken from each of them before enrolling them for the study

**Withdrawal Criteria**

1. Patients who were discontinued the treatment & did not returned for the follow-ups due to any reason.
2. If worsening of symptoms occurs.

**Statistical Analysis**

The changes in the parameters from baseline values and the value after 15 days were evaluated by "Paired –t test". (P) as $p>0.05$- insignificant, $p<0.01$- significant, $p<0.001$- highly significant.

**Criteria of Assessment-**

**Subjective Criteria**

Presence or absence of the symptoms of Threatened abortion formed subjective criteria. For making the assessment rational and scientific, the symptoms were given grades, according to their severity and presence in the body like duration of bleeding, intensity of bleeding, colour of bleeding, pain in lower abdomen.

**Objective Criteria**

It includes findings of ultrasonography which includes G.A. Sac Size, Presence or Absence of Cardiac Activity, Retroplacental Haematoma and Cervical Canal Dilatation. It was carried out before and after treatment to observe the reduction in symptoms of threatened abortion.

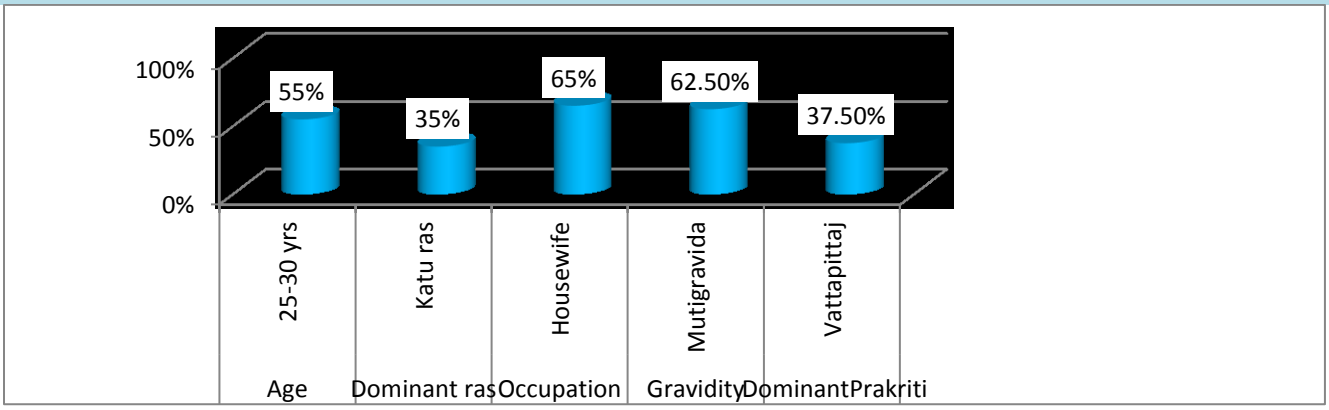
**Statistically analyzed.**

**Methodology**- This was an open randomized clinical trial. Present study total 40 patients were registered, out of which 14 patients were dropped out due to absence of fetal cardiac activity at initial ultrasonography findings. Hence the Present study was completed by 25 patients out of which,1 patient was not complet-

ed the study due to absence of fetal cardiac activity during her 2nd follow up.

All the information which was based on various parameters were gathered and statistical study was carried out in terms of mean (m) Standard deviation (S.D.), Standard Error (S.E.) paired test (t value). Finally, result was shown in terms of probability.

## RESULT AND DISCUSSION




Maximum number 55% patients in both groups were in the age group 25-30 years. The age incidence is, because it is most fertile period of women's reproductive life and mostly Indian girls get marry in this age group, so maximum number of patients was observed in this age group. In both the groups maximum no. of patients 35% were having *Katu Ras*. The majority of patients were not taking *Madhur Rasa*. As *madhur rasa Pradhan Aahara* help in the growth of fetus. Maximum no. of patients was having *Katu and Teekshna Aahara* that may cause faulty *rasa dhatu* formation. As proper formation of *rasa dhatu* leads to proper formation of *Uttrotardhatu Vridhi* which help in the nourishment of mother and fetus both. In both groups' maximum patients i.e. 62.5% were multigravida and out of which maximum patients had history of abortion. As, previous history of abortions may precipitate the abortion. In both groups Maximum number of patients (37.50%) had *Vatta-Pittaja Prakriti.* As, only *Vitiated Doshas* is the main causative factor in the etiopathogenesis of the disease. as in Group I (trial drug I And Trial drug II) drugs ingredients have *Madhur, Kashaya, Tikta Ras, Madhur Vipak, Sheet Veeya,* astringent, antioxidant, anti-inflammatory, Immuno-modulatary and anti-microbial properties which helps to prevent threatened abortion.



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**Table 1:** % age improvement of subjective and objective criteria in both groups: Inter group comparison of effect of therapy on Subjective criteria

| Symptoms | % age Relief | | Diff. In% age | "t" | P | Result |
|---|---|---|---|---|---|---|
| | Group-I | Group-II | | | | |
| Bleeding P/V | 87.48% | 100% | 12.5% | -0.395 | 0.697 | IS |
| Duration of Bleeding | 91.66% | 100% | 8.3% | -0.804 | 0.430 | S |
| Colour of Bleeding | 84.22% | 100% | 15.7% | -0.423 | 0.676 | IS |
| Pain in lower abdomen | 66.71% | 71.52% | 7.21% | 0.0461 | 0.964 | IS |

**Table 2:** Inter group comparison of effect of therapy on Objective criteria

| **Symptoms** | **% age Relief** | | **Diff. in %age** | **"t"** | **P** | **Result** |
|---|---|---|---|---|---|---|
| | **Group-I** | **Group-II** | | | | |
| Gestational sac Size | 66.63% | 100% | 33.37% | -0.161 | 0.873 | IS |
| Cardiac activity | -7.14% | 0% | -7.14% | -0.923 | 0.3 | S |
| Rertroplacental Haematoma | 100% | 0% | 100% | 0.923 | 0.365 | S |
| Cervical canal Dilatation | 100% | 0% | 100% | 0.923 | 0.365 | S |

**Table 3:** Inter group comparison of effect of therapy on Associated Symptoms

| **Symptoms** | **% age Relief** | | **Diff. in %age** | **"t"** | **P** | **Result** |
|---|---|---|---|---|---|---|
| | **Group-I** | **Group-II** | | | | |
| Fever | 100% | | 75.07% | 24.93% | -2.075 | 0.049 |
| Nausea | 90.05% | | 79.85% | 10.2% | -0.670 | 0.509 |
| Vomiting | 87.56% | | 87.4% | 0.16% | -0.161 | 0.873 |
| Generalized weakness | 91.71% | | 60.02% | 31.69% | -1.133 | 0.268 |
| Frequency of micturition | 66.66% | | 59.95% | 6.71% | -0.299 | 0.767 |

**Intergroup comparison of effect of therapy on individual criteria's**

**On Intergroup comparison** for duration of bleeding and in cardiac activity showed statistically significant difference in both the groups, which mean values of these parameters were better in Trial group II than in trial group I. Intergroup comparison for associated symptoms, fever and generalized weakness showed statistically difference in both the groups which mean value of these parameters was better in trial group I than in trial group II, No significant difference was observed on comparison in bleeding per vaginum, colour of bleeding, pain in lower abdomen and in gestational sac size, nausea, vomiting and frequency of micturition.

## CONCLUSION

In treated group with *Kaserukadi Payah and Garbhasaravhar Yoga,* there was reduction in symptoms like intensity of bleeding per vaginum, duration of bleeding, colour of bleeding, gestational sac size, cardiac activity, retroplacental haematoma as well as in cervical canal dilatation. There was also reduction in all the associated symptoms. Associated symptoms may aggravate the factors of threatened abortion. Trial group 1 *Kaserukadi payah* and *Garbhsaravhar yoga* are herbal preparation and no unwanted effect of the therapy was observed during the treatment and during follow ups. So, it can be used safely during pregnancy. Thus, it was concluded that the drugs of Trial group I (*Kaserukadi Payah and Garbhasravhar Yoga)* gave equally good results on Threatened abortion with comparison of Natural Micronized Progesterone**.**

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