Evaluation of the Yava-Kshara Taila Uttar Basti in the management of tubal blockage

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Abstract

Tubal blockage is very common and difficultly managed factor of female infertility. Its management available is beyond the reach of the common people of developing countries. Ayurveda does not possess a data-based management of this problem till date. Hence, this study was carried out to establish a data-based treatment regimen of tubal blockage through Ayurveda. Total 14 patients with 50% unilateral and 50% bilateral tubal blockage were registered for the present study, which aimed to find out the effect of intra uterine Uttar Basti of Yava-Kshara Taila on tubal blockage. The total period of the treatment was 2 consecutive cycles and Uttar Basti was given for 6 days in one cycle with an interval of 3 days in between. The dose for one Uttar Basti was 5 ml, and the procedure was carried out with proper antiseptic care. The criteria of assessment for the results were the reports obtained from hysterosalpingography (HSG) performed during and after treatment. The results were highly significant, as blockage was removed in 85.71% of patients. 7.41% patients conceived within the follow up period and no patient reported any feature of complication during the treatment or follow up period.

Introduction

Tubal blockage is the second most common factor responsible for female infertility with a prevalence of 25-35% [1]. It is very difficult to manage, because the treatment choices for it are only tubal reconstructive surgery and in vitro fertilization (IVF). Both of these, being run in very few infertility clinics in developing countries are not easily accessible. Chances of ectopic pregnancy and other complications are also there. On the other hand, there is no established reliable Ayurvedic treatment for the tubal blockage. Though, some Ayurvedic practitioners claim the effect of intra uterine Uttar Basti on tubal blockage, yet data-base treatment regimen is not available. Keeping this point in view, the present study was carried out as a very preliminary step to find out a reliable and data-based Ayurvedic management of tubal infertility.

Aims and objectives

The aims and objectives of the study included: i) to find out the effect of Yava-Kshara Taila Uttar Basti in the tubal blockage and ii) to study the complications, if arise, during and after the course of treatment.

Materials and Methods

Patients attending the O.P.D. of Stree Roga & Prasuti Tantra, I.P.G.T.& R. A., fulfilling the criteria for selection were incorporated into the study irrespective of caste, religion etc. A detailed history regarding infertility, family history, obstetric history, menstrual history, past illness and clinical finding pertaining to Dosha, Dushya, Dushti, Agni, Srotasa etc. were filled up in specially prepared proforma on Ayurvedic guidelines.

All the patients were examined per vaginally to assess any sign of infection or disorder related to tubal blockage or infertility. The present study was a randomized clinical trial.

Criteria for selection of cases

Patients of child bearing age with complaint of failure to conceive due to tubal factor within one or more years of regular, unprotected coitus were included in the study. Both the patients, having primary and secondary infertility were included for the study after taking consent from them.

Patients having any urogenital infection, patients having history of excessive menstruation and patients suffering from any chronic debilitating disease, sexually transmitted diseases, hepatitis B, contagious diseases etc. were also excluded from the study.

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Parameters of diagnosis and assessment of results

Patients were selected on the basis of hystero-salpingography (HSG) for the least chances of false reports. Biochemical screening tests for HIV (Human Immunodeficiency Virus), HBsAg (Australia antigen for hepatitis B) and VDRL (Venereal Disease Research Laboratory) were carried out in all the patients before starting the course of treatment. Transvaginal sonography was carried out before treatment to rule out any pelvic pathology. Routine haematological investigations and urine tests were done before and after treatment.

Selection of drug

Kshara-Taila is mentioned for Stree Roga Adhikar in Bhaishajya Ratnavali. Kshara Taila (Karna Rogadhikar) is being practiced for Intra Uterine Tubal Blockage in some parts of India for its Ushna-Tikshna property. But for present study, only Yava-Kshara was selected to prepare Taila for first group to make the preparation of drug easier.

Yava-Kshara is considered as Garbhaprada (fertility creating) and effective in Artavanasha (amenorhoea) in Ayurvedic treatises and is indicated for internal administration [2].

Results were found within the prescribed standard limits [3].

Table 1: Pharmaceutical analysis of Yava-Kshara Taila

Organoleptic parameters	
Colour	Yellowish
Odour	Not specific
Appearance	Clear
Clarity	Thin, clear
Physico-chemical parameters	
Loss on drying	0.779%
Refractive index	0.516
Specific gravity	1.464
Acid value	2.826(w/w)
Saponification value	301.19(w/w)
Iodine value	99.2(w/w)

Course of treatment

The present study was carried out in total 14 patients of tubal infertility. The patient was admitted one day after cessation of menstruation and 5 ml intra uterine Uttar Basti was given by for 6 days in a cycle (with the interval of 3 days in between) in each cycle. The course of the treatment was 2 consecutive cycles and the HSG was repeated for the analysis of results after the cessation of menstruation in third cycle.

Method of Uttar Basti

Purvakarma (Pre-procedure) – Snehana of Bala Taila on lower abdomen, back and lower limbs and then Nadi Sveda with the help of water steam for 15 minutes on lower abdomen and back was done in patients before each Uttar Basti. Yoni Prakshalana with Panchavalkala Kvatha [5] was done as aseptic care of the private part.

Pradhana Karma – The procedure is carried out in the operation theatre. The oil and instruments are autoclaved. Patient is taken on operation table in dorsal lithotomy position.

The private part (already shaved) is cleaned with antiseptic solution. Vagina and cervix is visualized with the help of Sim's speculum [6] and anterior vaginal wall retractor [7]. The anterior lip of cervix is catched with the help of Allis' forceps [8]. Uterine sounding is done and then Uttar Basti cannula, already attached with 5 ml. syringe filled with medicated oil is passed in uterine cavity after making head low position. The drug is pushed above the level of internal os with constant force, but fast to make the drug reached up to the tubes.

Pashchat Karma – The patient is sent to bed and the bed is kept with head low for 2 hours. The lower abdomen is fomented with hot water bag.

Precautions

The patients were asked to avoid very spicy food during treatment. Coitus was prohibited during the course of Uttar Basti. Proper care was taken for not allowing patients to suffer from constipations.

Assessment of complications

As the Taila prepared with Ushna-Tikshna Dravya was administered inside the uterus. Possibility of complications can not be neglected totally. Per vaginal bleeding and lower abdominal pain were the most probable complaints during and after procedure. It was considered as complications, only if this was very much troublesome for the patient. Features of any type of urogenital infection during and after procedure was taken as complication.

Points to stop the treatment

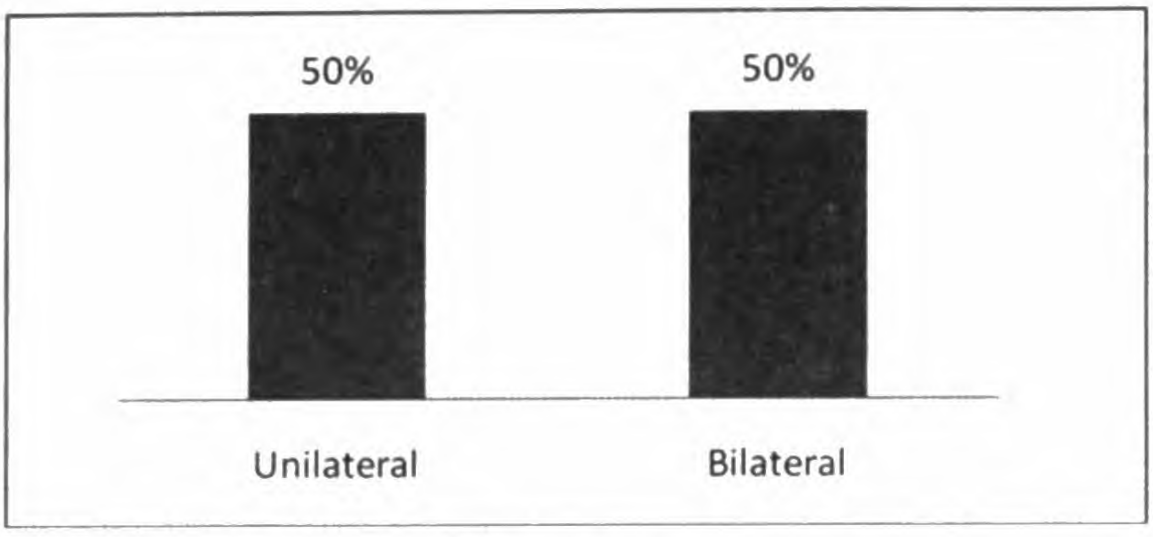
Some points were decided to stop the treatment, if developed during treatment. If the patient conceives in between the course of study. If signs of any type of urogenital infections are observed.

If heavy per vaginal bleeding starts and If there occurs severe abdominal pain, which troubles the patient much.

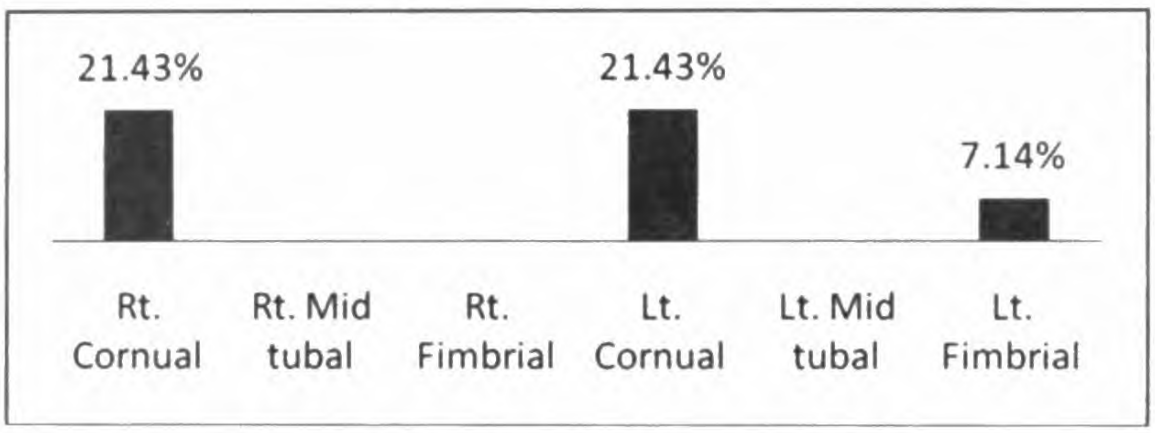
Follow up study

Follow up study for pregnancy or any late complication was carried out for 2 months after the completion of treatment. Any new complaint emerged during follow up period related to study was also noted.

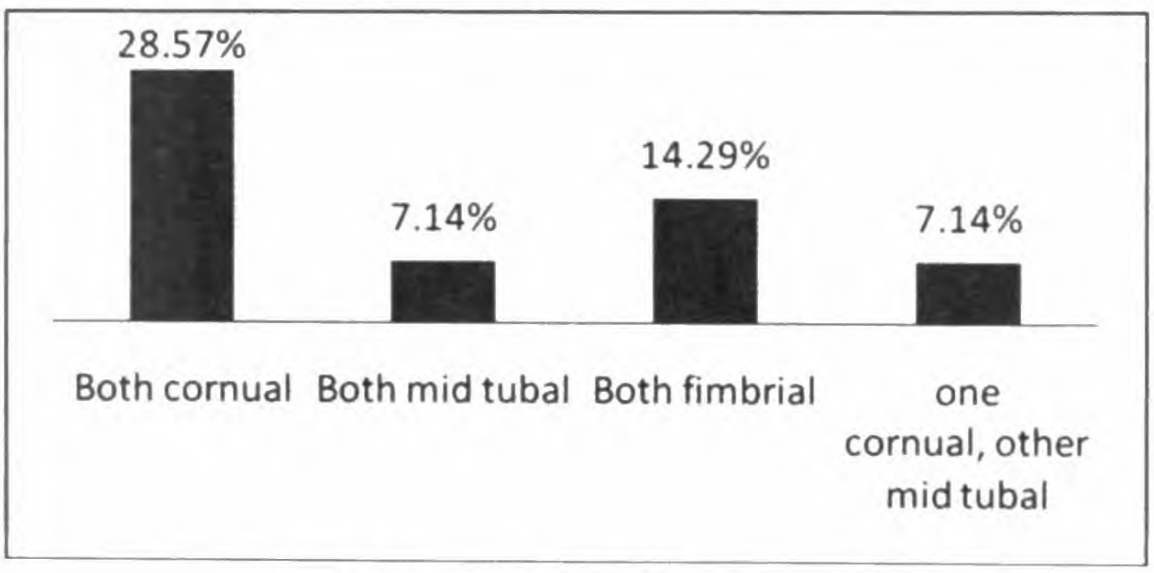
Observations



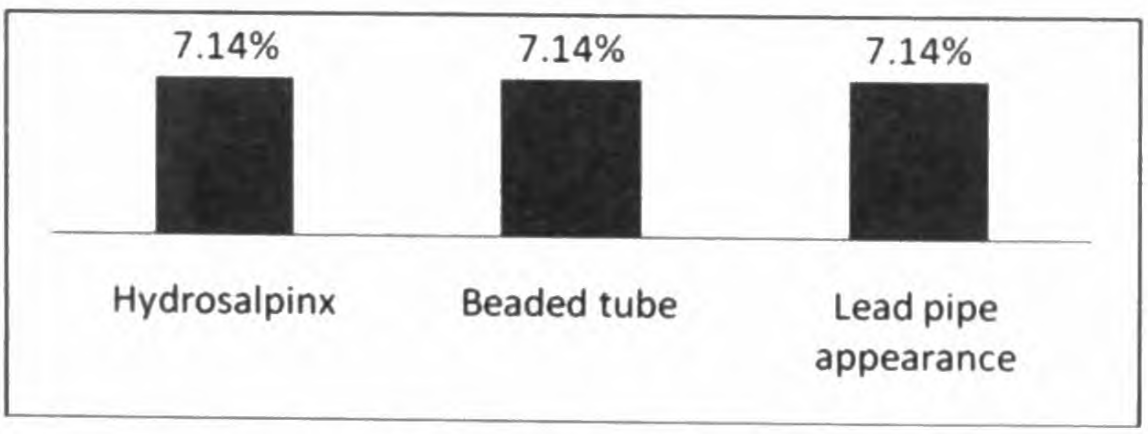
Graph 1. Tubal blockage in 14 patients



Graph 2. Sites of unilateral blockage (n=7)



Graph 3. Sites of bilateral blockage (n=7)



Graph 4. Other tubal anomalies in 14 patients

Table 2: Observations during and after procedure

Findings		*Number of patients*	*%*
Abdominal pain		08	57.14%
Severity	Tolerable	08	57.14%
	Intolerable	-	-
Duration	< 1 hour	08	57.14%
	>1 hour	-	-
Per vaginal bleeding		09	64.29%
Amount	Spotting	09	64.29%
	More	-	-
Quality	Fresh blood	-	-
	Dark blood	09	64.29%

No complication or any adverse drug reaction was noted during and after procedure.

Table 3: Total effect of therapy

No. of patients	*Positive results*	*%*	*No. of patients, who conceived*	*%*
14	12	85.71%	01	07.14%

Table 4: Patients, who could not conceive within follow up period after block removal

No. of patients, in who block was removed but no conception	*Patients, in who no other factor could be detected*	*Patients, in who other factors were involved*
11	02	09

Table 5: Statistical comparison (t-test) of haematological and urinary analysis (before and after treatment)

Parameter	*Mean*		*S.D.*	*S.E.*	*t*	*P*
	B.T.	*A.T.*				
Hb%	10.92	10.64	0.545	0.15	1.911	>0.05
TC	7657	8042	1251	334.6	1.152	>0.05
N%	61.28	61.07	5.793	1.55	0.138	>0.05
L%	30.14	28.92	5.250	1.4	0.865	>0.05
E%	3.28	2.42	2.248	0.60	1.42	>0.05
B%	2.92	2.92	1.037	0.28	0.00	>0.05
M%	1.71	0.85	2.500	0.534	0.14	>0.05
ESR	27.14	24.64	10.27	2.75	0.910	>0.05
PCV	32.14	31.42	7.040	1.35	0.574	>0.05

Discussion

The description regarding the prevalence of unilateral and bilateral tubal blockage is not available. The main reason behind it can be that the tubal block is thought to be a very serious problem, only if is bilateral. It is assumed that if one tube is patent and functioning, it will perform as the channel between peritoneal ovum and sperm. Unilateral blockage is not given importance by modern gynaecologist, and that is why literature regarding its incidence is not available in modern books. Yet unilateral blockage is also important to give due consideration, because, it reduces the possibility of conception. And the condition becomes worse, if another patent tube is not normal physiologically. The incidence of the unilateral and bilateral tubal blockage both, in the present study was 50% (Graph 1). It shows the prevalence of both the conditions high in the society. The most prevalent site of blockage was cornual with 21.43% in right and left both sides (Graph 2). This data supports the already established fact that proximal (corneal) tubal block is the commonest.

Proximal tubal occlusion is mostly due to an inflammatory phenomenon, secondary to an ascending sexually transmitted disease, puerperal infection or septic abortion. It may also be associated to salpingitis isthmica nodusa, endometriosis, polyposis, or other rare causes of endosalpingitis. The other tubal anomalies were also observed in the present study with 07.14% hydrosalpinx, 07.14% beaded tubes and 07.14% lead pipe appearance of fallopian tubes (Graph 3). All these deformities are the manifestation of active tuberculous infection or the after effects of some previous tuberculous infection. The strong antituberculour drugs though, pacify the infection, but can't restore the damage caused by this bacterium, and the damage generates several factors of infertility. Tuberculosis is still, a great problem in front of the population of developing countries like India.

Analyzing the clinical manifestations during procedure, 57.14% patients complained lower abdominal pain (Table 2). The pain was within tolerating capacity in 57.14% patients, and no patient complained pain beyond their tolerating limit. The duration in 57.14% patients was < 1 hour, while no patient suffered from pain for more than one hour after the procedure. The abdominal pain within the tolerating capacity was not considered as complication, because it shows the contractile response of uterus to remove the blockage from the site of obstruction. It was assumed that with the obstruction from the blockage site will be removed with the scraping (Lekhana) property of Ushna-Tikshna drugs and also by the contractile response of uterus. The contractile response was confirmed by the lower abdominal pain, which was a common complaint after procedure. The scraping action of the drugs given by Uttar Basti was proved by the 64.29% patients, who complained vaginal bleeding. All the 64.29% patients had bleeding in the form of spotting of dark colour blood. No patient had excessive or fresh bleeding. It proves the removal of the inner uterine as well as tubal lining by the Ushna-Tikshna and Lekhana drugs.

The total effect of therapy was very encouraging and highly significant on tubal blockage. The tubal block was removed in total 85.71% patients. Other than that, no complication was noted during and after procedure in any patient. It is highly appreciating that, no drug other than test one was given to patients during treatment. Still, symptoms of genitourinary infection were not reported in patient. It proves the intra uterine Uttar Basti as a safe therapeutic measure against tubal blockage.

7.14% patients conceived within the follow up period of 2 months (Table 3). It seems to be due to the fact that most of the patients, who could not conceive were having one or more factor of infertility other than tubal blockage (Table 4). The tubes were found patent in 12 patients after treatment. One conceived and 11 out of them could not conceive within follow up period. These patients were suffering from other factors of infertility including male factor. Thus, it is not possible to comment on the rate of conception with this study. The present study only suggests the highly encouraging results of tubal block removal with Yava-Kshara Taila Uttar Basti.

Interpretation of mode of action of intra uterine Uttar Basti on tubal blockage

Action of Uttar Basti on various disorders is by both the ways, local as well as systemic. In case of tubal blockage, this effect seems to be more local than systemic. The Tila Taila [9,10,11,12] is Vranashodhaka and Vranapachaka. It is Krimighna too. Other than that its specific role on uterus and reproductive tract is also mentioned as Garbhashayashodhana and Yonishula-prashamana. All these properties indicate towards its antiseptic as well as anti-inflammatory effects. Its Vyavayi and Vikasi Guna show its potency to enter in minute channels and to get spread easily. Thus, it should be the best medium for any drug to reach in tubal cavity and remove the blockage. In some other study, result of only Tila Taila Uttar Basti on tubal blockage can also be studied to find out a cost-effective and easily available alternative. In both the groups, the selected drugs were also having the same Doshaghnata. It also has Gulmanashana and Kaphanissraka Karma.

Any of the Kshara is said to be the best for not allowing recurrence. Hence, the Yava-Kshara works with its Tikshna and Vata-Kapha Shamaka properties in removal of blockage. It helps in scraping of obstructing substance and also removes the endometrial lining of tubes and uterus. And it is supported by the 64.29% patients, who complained of dark colour bleeding after Uttar Basti. It removes the fibrosed and damaged endometrium and promotes its rejuvenation. Thus, this management not only removes the blockage, but also creates a favourable environment inside the uterus for implantation. The statistical comparison of the results obtained from the haematological and urinary analysis of before and after

treatment show non-significant results (Table 5), which are evidence of no complication by the Uttar Basti.

The mode of action of Uttar Basti on tubal blockage can be described in following points:

i) it removes the blockage of tubal lumen by directly acting on obstruction mechanically and restores the normal endometrium, as endometrial covering is there inner side of tubes too, scraping and regenerating of it also leads to normalization of tubal functions

ii) it restores the normal functions of cilia by stimulating it

iii) it may break the tuboperitoneal adhesions after getting spilled from fimbria.

Conclusions

Intra uterine Uttar Basti with Yava-Kshara Taila is a highly significantly effective therapeutic measure against the fallopian tubal blockage. Possibility of any serious complication is not evident from the study.

Thus, with some further research studies, Yava-Kshara Taila Uttar Basti can be established as a data base, reliable, safe and easily accessible Ayurvedic treatment regimen of tubal infertility.

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