ISSN : 2249-5746

International Journal of Ayurvedic and Herbal Medicine 5:6 (2015) 2033 –2040

Journal homepage: http://www.interscience.org.uk

Role Of AtiBala (Abutilon Indicum) In Garbha Sthapaka And Garbha Vruddhikara Prabhava In Pregnant Women With History Of Repeated Abortion

Dayani Siriwardana*Mistry I.U , Skandhan K.P. **, Karunarathne Y.A.U.D. ***

Department of Kaumarabritya Prasuti Stree RogaInstitute of Post Graduate Teaching and Research
Gujarat Ayurved UniversityJamnagar INDIA
**Department of PhysiologyShree MP Shah Medical CollegeJamnagar 361 008 INDIA

Present Address

*Department of Prasuti Tantra
*** Department of Kaumarabritya Prasuti Stree Roga
Institute of Indigenous medicineUniversity of ColomboSRI LANKA
** 902 VC Valley Apt,Opp. CSEZ, KakanadCochin 682 037 INDIA

ABSTRACT:

Ayurveda has a vast knowledge about formation and development of "Garbha" and its pathology. Ayurveda prescribe herbal preparations for "Garbhasthapaka". Atibala (Abutilon indicum) was well accepted as a nourishing and strength promoting drug. It has Rasayana property and fetal growth promoting action. The present study was designed to find out the effect of Atibala as a single drug for Garbhasthapaka prabhava and Garbha vruddhikara prabhava in pregnancy with repeated abortion history. Sixty pregnant women of second and third trimester were included and they were divided into two groups. The effect of Atibala was compared to that of combination of Amalaki, Godanthi and Garbhapalarasa (Amalaki group). Studying results of Atibala and Amalaki groups during the treatment or after no abortion took place. The maternal as well as fetal growth was representing Garbhavruddhikara prabhava which was prominently taken care by Atibala.

KEY WORDS:

Pregnant women, Garbha Sthapaka, Garbha Vruddhikara Prabhava, Atibala (Abutilon Indicum), Amalaki,

INTRODUCTION:

Pregnancy is desired and dreamt by all women. Giving birth to a healthy child is important. Obstetric history of multigravid pregnant women has risk factor, for abortions or still births. Fetal wastage is a great tragedy for a mother and can occur due to many causes. Pregnancy being a maternal phenomenon in which no pathology or disease should occur, but sometimes diseases may occur due to malnutrition, environmental

factors, fetal causes or due to some other diseases which leave their symptoms in pregnant women. At times some of these symptoms may aggravate and cause complications to the fetus and mother.

Out of many disorders of fetus "Garbha srava" and "Garbhapatha" (abortion) is having an important role among all. Charaka observed that change in factors responsible for proper growth and development of fetus can cause either intrauterine death of fetus or its expulsion before viability. (Cha.Sha.4/26)

Gynecologists in Ayurveda prescribed Ati Bala in combinations with other herbs for perceiving normal pregnancy, or during presence of bleeding in pregnancy or in threatened abortion etc. Since Ati Bala in combination with other herbs is accepted as having Garbha Vruddhikara, Garbha Sthapaka, Balya, Vrumhana effect on the mother and the fetus. The present study was designed to find out the effect of Ati Bala as a single drug in Garbha Sthapaka and Garbha Vruddhikara prabhava with history of repeated abortions.

MATERIALS & METHODS:

Preparation of drugs

Powder of Ati Bala alone and Amalaki, Godanthi and Garbhapala Rasa were prepared in pharmacy division of the Institute of Post Graduate Teaching and Research, Gujarat Ayurveda University.

Clinical study

Criteria for selection of patients

Sixty pregnant women who reported to the ante natal clinic unit of Institute of Post Graduate Training and Research in Ayurveda hospital, Jamnagar, fulfilling the criteria for diagnosis of repeated abortions history was with gestational age >12 weeks were registered in the present study. They were randomly divided into 2 groups of equal number.

Group 1:(Control group) Thirty were included in this group.They were treated with a herbal compound containing Amalaki, Godanti and Garbhapala Rasa in the form of Choorna (powder) which was the drug regularly prescribed for pregnant women in this institution. The dosage was 1.5g divided in 3 equal parts, thrice a day with luke warm water for the duration of 12 weeks.

Group 2:(Study group) Thirty were included in this group. They were treated with Ati Bala, the dosage of drug(Choorna) was 9g per day in three equally divided doses, with luke warm water for the duration of 12 weeks.

All included in Group1 & 2 were instructed to visit outpatient department weekly, till delivery.

Criteria for Diagnosis and Assessment

1. By finding ultrasonographical values of following parameters before during and after treatment

a. Biparietal diameter (BPD)

b. Femoral Length (FL)

c. Abdominal Circumference(AC)

d. Head Circumference (HC)

e. Volume of Amniotic Fluid (AFV)

2. By routine investigations – before and after treatment Hb%, WBC, ESR, urine and stools. Blood group ABO and Rh before treatment

3. By measuring maternal

a. Uterine height

b. Maternal weight

c. Abdominal Circumference

Investigations were done before treatment and weekly for 3 months period. Comparison (t test) was made before and after treatment and also between the treatment on each clinical and diagnostic parameters in control and study groups.

RESULTS:

The patients of groups 1 & 2 belonged to the age group of 18 – 38 years and many of them were not able to point out any cause for abortions (55.6%mean). Other causes were Abhighata (mean% 27.09), Ativyayama, Atikrodha, Atishoka, Atibhaya, Kulavritta, Udvegajanan and Atiushna ahara. Many (70%) had more than 3 abortions. Their complaints included backache, pain in abdomen, nausea, vomiting, weakness, burning micturition, white discharge, constipation and bleeding p/v.

Table 1: USG readings. Mean of difference between before and after treatment of Groups 1 & 2

	Trimester	Group 1	Group 2	Before treatment group 1 V/S 2		During Treatment group 1 V/S 2		After Treatment group 1 V/S 2		First + second before V/S after	
				't' test	p	't' test	p	't' test	p	't' test	p
BPD	Second	12.1	17.18	-0.36	0.8	-1.73	0.1	-2.90	0.1	-2.90	0.01**
	Third	8.8	15.34	-0.59	0.6	-2.10	0.1	-1.30	0.3		
HC	Second	49.6	66.9	-0.25	0.9	-0.14	0.9	-2.07	0.1	-2.57	0.02*

	Third	42.5	55.72	-0.32	0.8	-0.96	0.4	-1.47	0.2		
FL	Second	12.4	15.51	-0.59	0.6	-0.78	0.5	-1.09	0.3	1.01	0.4
	Third	2.63	7.5	-0.68	0.6	-0.09	Ns	-0.68	0.6		
AC	Second	43.1	67.84	-0.04	Ns	0.76	0.5	-2.17	0.1	-2.08	0.05*
	Third	40.5	55.77	-0.37	0.8	1.20	0.3	0.85	0.5		
HC/AC	Second	0.086	-0.163	-0.27	0.8	-0.26	0.8	-0.96	0.4	0.11	NS
	Third	0.031	-0.056	-0.16	0.9	-0.45	0.7	0.90	0.4		
FL/AC	Second	0.041	0.04	-0.07	Ns	-0.03	Ns	0.93	0.4	1.18	0.3
	Third	0.001	0.003	-0.32	0.8	-1.09	0.3	0.67	0.6		
Fetal Weight	Second	-0.009	0.253	1.16	0.03*	0.48	0.7	-1.36	0.3	5.31	0.01**
	Third	0.665	1.831	0.53	0.7	0.80	0.5	-3.66	0.001**		
AFV	Second	-4.30	2.27	0.77	0.5	2.59	0.02	3.34	0.01	0.39	0.001**
	Third	0.55	2.69	0.39	0.8	3.57	0.01**	4.08	0.001**		0.8

Table 2: Difference in mean values of maternal parameters of Group 1 & 2

	Trimester	Group 1	Group 2	During Treatment		After Treatment		Overall Treatment	
				t	p	t	p	t	p
Maternal weight	Second	3.13	3.8	-1.18	0.3	-1.25	0.3	-2.75	0.01*

	Third	5.2	8.53	1.034	0.4	-4.18	0.001**		
Maternal Abdominal Circumference	Second	2.6	7.64	-0.46	0.7	-1.36	0.3	-1.16	0.3
	Third	4.10	11.87	-0.51	0.7	-1.08	0.3		
Uterine Height	Second	2.76	3.8	0.43	0.7	-0.4		-0.20	0.9
	Third	0.8	5.07	-0.61	0.6	-0.64	0.6		

*significant **highly significant

Table 3: Results of Hematological study: Hemoglobin gm%

Groups	Before treatment		After treatment		Difference [BT – AT]
	Mean	Range	Mean	Range	
1	10.73	8 – 12.2	10.32	9 – 12.5	0.41
2	11.24	9.5 – 13.5	10.73	8.2 - 12	0.51

Table 4: Total WBC count in ml/cmm

Group	Before Treatment		After Treatment		Difference
	Mean	Range	Mean	Range	[BT – AT]
1	9485.29	7500- 12000	8992.86	8200-10000	492.43

2	9073.33	6000 - 11300	9115.00	8600 - 10300	41.67

Table 5: Differential count of WBC

Groups	Group 1		Group 2	
Differential count (mean %)	BT	AT	BT	AT
Neutrophil	69.35	70.33	69.90	72.29
Lymphocyte	27.06	26.17	26.36	24.43
Esosinophil	3.06	2.83	2.98	2.57
Monocyte	0.53	0.67	0.76	0.71
Basophil	0.00	0.00	0.00	0.00

Table 6: Results of Urine Examination

Group	Before Treatment No of cases in %				After Treatment No of cases in %			
	Alb.	Sug.	Pus	Epl	Alb	Sug	Pus	Epl
Group 1	0.00	0.00	23.52	0.00	0.00	0.00	20.0	0.00
Group 2	9.67	6.45	0.00	0.00	6.25	6.25	0.00	0.00

DISCUSSION:

Garbhasthapaka was a great self explanatory word in Sanskrit language suitably preferred by Ayurveda to the persisting attachment of the mother and fetus from the time of implantation of egg till delivery. Charaka termed the expulsion of fetus upto 4 th month of pregnancy as Garbha Srava, because the product of conception were liquid, thereafter in 5^{th} and 6^{th} months it was termed as Garbha Patha, because by this period the fetal parts had attained some stability.

Garbhasthapana drugs are these which after counteracting the effect of harmful factors for fetus help in its proper maintenance, thus this can be considered even as a treatment for abortion. (Tewari, 1986) Garbhasthapana drugs are prescribed throughout pregnancy for the benefit of mother and fetus.

In Group 1 the difference in the increase in the weight in 2nd trimester 3.13kg and 3rd trimester 3.8kg before and after treatment and in Group 2 this was 5.2kg for 2nd trimester and 8.53kg for 3rd trimester (Table 2). The difference between the both groups in both trimesters showed that maternal weight was increased by Ati Bala, which was increasing the overall weight of the mother as well as the fetus.

Maternal abdominal circumference (MAC) is an external measure to understand the process of pregnancy. When comparing Group 1 and 2, Group 2 showed highly significant difference after treatment (Table 2). Considering uterine height, in Group 1, 2nd trimester the difference shown was 2.7 inch and only 0.8 inch for 3rd trimester (Table 2). In case of group 2 (Ati Bala group) 2nd trimester, it was 3.8 inch and 5.07 inch for 3rd trimester (Table 2).

Biparital diameter was shown to increase from before to during to after treatment in both trimesters in both groups. However statistically no difference was seen when, they were compared to each other. Statistical values of head circumference, femur length and abdominal circumference of the fetus shown, that Ati Bala was highly effective (Table 1).

The ratio between HC/AC is an important assessment for the growth of the fetus. When comparing Group 1 and 2 no statistical significant difference was observed here. Though results showed Ati Bala was better and more useful for fetal growth during 2nd as well as 3rd trimester. The ratio between femur length and abdominal circumference during normal pregnancy increase as pregnancy advances. But during the last trimester the progress in this ratio decreases. In Group 1 and 2 the same was observed except in the case 3rd trimester of Group 2, that the difference between before and after the treatment was 0.003. However looking in to the percentage difference between before, during and before and after the treatment, steady decrease was observed (Table 1).

In Group1 showed decrease in fetal weight from 0.604 to 0.595kg before and after treatment. This was not seen during 3rd trimester. In case of Group 2 the growth was progressing in both trimesters. Highly significant difference was seen between Group 1 and 2 after the treatment showing better effect of Ati Bala for fetal growth as well as mass.

The Amniotic Fluid Volume (AFV) is important to identify IUGR at an earlier level. Amalaki, Godanthi and Garbhapala Rasa are not useful for increasing the AFV during 2nd trimester. In 3rd trimester increase in AFV. Highly significant difference was seen when the mean of AFV of Groups 1 and 2 was compared between before and after treatment. Results were showing to maintain AFV in normal range Ati Bala was very useful.

Studying all the results in both Ati Bala(Group 2) and Amalaki(Group 1) no abortion was reported during or after the treatment. At the end of the study many of them delivered normally and others are in waiting. The no abortion role of pregnancy was representing by the character of Garbhasthapaka. The maternal as well as fetal growth was representing Garbha Vruddhikara Prabava which was highly prominent in case of Ati Bala(Group 2). Looking in to all USG records (Table 1) and ratios calculated from values showing Ati Bala (Group 2) was more superior to Amalaki (Group 1).

CONCLUSION:

It is concluded Ati Bala *(Abutilon indicum)* powder is highly effective for fetal development in compared with powder of Amalaki, Godanthi Bashma and Garbhapala rasa in pregnant women who have previous repeated abortions due to Garbhasthapaka and Garbha Vruddikara Prabhava.

REFERENCES:

1. Ashtanga Sutrasthan 12-82, 13-3, 15-4, 20-4,5, 5-24
2. Ashtanga Samgraha Sharira Sthan 1-47, 54, 57, 63, 64, 2-3,6,23,24,56,85, 3-5, 4-3,11,12,27, 5-9,10,11,12
3. Charaka Samhita Chikithsa 2-30,46, 8-33,34,35,36,37, 30-16,20
4. Charaka Samhita Nidana 1-8,9,12
5. Charaka Samhita Sharir 1-19,77, 2-4,6,15,23,31,33,35, 3-1,3,4,5,7,8,9,10,11,12,13,14,17, 4-4,5,6,7,11,12,16,18,21,26,29,30
6. Chopra R,N. Nayar S.L. Chopra I.C. Abutilon (Malvacene) Glossary of Indian Medicinal Plants with active principles 1965-1981 Part I
7. Siriwardana S.A.D., Mistry I.U., Skandan K.P. 1999 – A Choorna- standardization of preparation of choorna with special reference to Atibala (Unpublished)
8. Report on identification of high risk families, mothers and outcome of their offsprings, ICMR Task Force Study, ICMR, New Delhi, 1990
9. Tiwari P.V. Ayurveda Prasuti Tantra Evam Stree Roga, Part 1, Chawkambha Orientalia, Varanasi, 1986
10. Dutta D.C. Text book of Obstetrics, New Central Book Agency, Culcutta, 3rd edition, 1997