



Review Article

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REPRODUCTIVE AND CHILD HEALTH CARE THROUGH BALA TAILA: A REVIEW ON AYURVEDA FORMULATION

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ABSTRACT

India, with a population of more than 1 billion people has many challenges in improving the health and nutrition of its citizens. It is important to recognize that reproductive, maternal and child health cannot be addressed in isolation as these are closely linked. One drug from Ayurveda system which should be considered for Reproductive and child health care is Bala Taila. Different formulations of Bala Taila given by different samhita have been collaborated and compared to understand its pharmacological action. Ayurveda texts have explained usage of Bala Taila in treatment of Gynecological diseases (Stree roga) as well as Obstetrics disorder (Garbhini & Sutika) and in neonates (Shishu paricharya), Bala taila has proved its immense importance in all these conditions.

Keywords: Bala Taila, Reproductive and child health, Garbhini, Sutika & Navjata shishu paricharya.

INTRODUCTION

India, with a population of more than 1 billion people has many challenges in improving the health and nutrition of its citizens. Steady declines have been noted in maternal and infant mortalities but the pace has been slow. In order to bring greater impact through the RCH program, it is important to recognize that reproductive, maternal and child health cannot be addressed in isolation as these are closely linked to the health status of the women in various stages of life cycle. Problems specific to women's reproductive health broadly can be divided into two.

First, problems occurring with non-pregnant women, known as gynecological morbidity (Stree roga). Second, problems occurring during pregnancy (Sagarbha), delivery (Prasuta) and the puerperium (Sutika), referred to as obstetric morbidity. According to the world health organization, herbal medicines are being used by about 80% of the world population primarily in the developing countries for primary health care. This plant-based traditional medicinal system continues to play an essential role in health care. Bala Taila, drug from Ayurveda, should be considered for Reproductive and child health care as it proves its utility in all stages of women reproductive life.

Composition of Bala Taila

Table 1: Contents of Bala taila

Sushrut samhita ¹	Ashtanga Hridayam Sharira ²	Ashtanga Sangraha Sharira ³	Sharangdhara Samhita ⁴	Ashtanga hridayam Chikitsa ⁵
Bala mool (<i>Sida cordifolia</i>)	√	√	√	√
Shalaparni (<i>Desmodium gangeticum</i>)	√	√	√	Padmaka (<i>Prunus pudum</i>)
Pushniparni (<i>Uraria picta</i>)	√	√	√	Rasna (<i>Pluchea lanceolata</i>)
Brihati (<i>Solanum indicum</i>)	√	√	√	Mastu (Supernatent liquid of curds)
Kanatkari (<i>Solanum surettense</i>)	√	√	√	Ikshurasa (<i>Saccharum officinarum</i>)
Bilva (<i>Aegle marmelos</i>)	√	√	√	Shukta (Fermented gruel)
Agnimanth (<i>Premna mucronata</i>)	√	√	√	Madanaka (<i>Randia spinosa</i>)
Patala (<i>Sterospermum suaveolens</i>)	√	√	√	Shati (<i>Hedychium spicatum</i>)
Gambhari (<i>Gmelina arborea</i>)	√	√	√	Sarala (<i>Pinus roxburghi</i>)
Shyonaka (<i>Oroxylum indicum</i>)	√	√	√	Devdaru (<i>Cedrus deodara</i>)

Till Taila (<i>Sesamum indicum</i>)	√	√	√	√
Ajaksheera (Goat milk)	√	√	√	√
Yava (<i>Hordeum vulgare</i>)	√	√	√	Katphala (<i>Myrica nagi</i>)
Kola (<i>Zizipus jujube</i>)	√	√	√	Lavanga (<i>Syzigium aromaticum</i>),
Kulattha (<i>Dolichos biflorua</i>)	√	√	√	Nakha (<i>Capparis zeylanica</i>)
Varahi kanda (<i>Dioscorea bulbifera</i>)				Kankola (<i>Piper cubeba</i>),
Kakoli	√	√	√	Kushta (<i>Saussurea lappa</i>)
Kshirakakoli	√	√	√	Mamsi (<i>Nardostachys jatamansi</i>)
Jivaka	√	√	√	Priyangu (<i>Callicarpa macrophylla</i>)
Rishbhak	√	√	√	Sthauneya (<i>Clerodendrum infortunatum</i>)
Mudgaparni (<i>Phaseolus trilobus</i>)	√	√	√	√
Mashaparni (<i>Terminus labialis</i>)	√	√	√	√
Meda	√	√	√	Turushka (<i>Hyoscyamus niger</i>)
Mahameda	√	√	√	Dhyama (<i>Anogeissus latifolia</i>)
Vidarikand (<i>Pueraria tuberosa</i>)	√	√		Musta (<i>Cyperus rotundus</i>)
Guduchi (<i>Tinospora cordifolia</i>)				√
Karkatashringhi (<i>Pistacia integrima</i>)				Atibala (<i>Abutilon indicum</i>)
Ashwagandha (<i>Withania somnifera</i>)	√	√	√	Harenu (<i>Vitex agnus-castus</i>)
Tugakshira (<i>Bambusa arundinace</i>)				Jati (<i>Myristica fragrans</i>)
Padmak (<i>Prunus puddu</i>)				Surasa (<i>Ocimum sanctum</i>)
Prapoudarik (<i>Cassia absus</i>)				Vyaghranakha (<i>Capparis zeylanica</i>)
Jeevanti (<i>Leptadenia reticulata</i>)				Rishabhaka (<i>Mimusoops hexandra</i>)
Saileyak (<i>Parmelia perlata</i>)	√	√	√	√
Patra (<i>Cinnamomum zeylanica</i>)	√	√	√	Jivaka (<i>Malaxis acuminata</i>)
Sariva (<i>Hemidesmus indicus</i>)	√	√	√	Palasha (<i>Butea monosperma</i>)
Shatavari (<i>Asparagus racemosa</i>)	√	√	√	Kasturi (Musk)
Vach (<i>Acorus calamus</i>)	√	√	√	√
Madhuka (<i>Glycyrrhiza glabra</i>)	√	√		√
Mrudvika (<i>Vitis vinifera</i>)				Sprikka (<i>Delphinium zaili</i>)
Saindhava lavana (<i>Sodium chloride</i>)	√	√	√	Kumkuma (<i>Crocus sativus</i>)
Sarjarasa (<i>Vateria indica</i>),				Nagakeshara (<i>Mesua ferrea</i>)
Devadaru (<i>Cedrus deodara</i>)	√	√	√	Jatiphala (<i>Myristica fragrans</i>)
Agaru (<i>Aquilaria agallocha</i>),	√	√	√	√
Saral (<i>Pinus longifolia</i>)		√		Ambu (<i>Pavonia odorata</i>)
Manjistha (<i>Rubia cordifolia</i>)	√	√	√	√
Chandan (<i>Santalum album</i>)	√	√		√
Kustha (<i>Saussurea lappa</i>)	√	√		√

Ela (<i>Elettaria cardamomum</i>)	√	√	√	√
Krishna sariva (<i>Ichnocarpus frutescen</i>)	√	√	√	Kunduru (<i>Boswellia serrata</i>)
Jatamansi (<i>Nardostachys jatamansi</i>)			√	√
Shatapushpa (<i>Foeniculum vulgare</i>)	√	√	√	Neelika (<i>Indigofera tinctoria</i>)
Punarnava (<i>Boerhavia diffusa</i>)	√	√	√	Karpooora (<i>Cinnamomum camphora</i>)
Tagar (<i>Valeriana wallichii</i>)	√	√	√	√
	√	√		Twak (<i>Cinnamomum zeylanicum</i>)
		√		Shrinivasaka (<i>Pinus roxburghii</i>)
				Plava (<i>Nyctanthes arbor-tristis</i>)

Bala taila described in Ashtanga hridayam and Ashtanga sangraha have triphala and bola in addition to the ingredients of bala taila mentioned in Sushruta samhita.

Phytochemical analysis of bala taila and chemical constituent⁶

Table 2: Phytochemical analysis and chemical constituent of bala taila

Nature of the drug	Liquid
Color	Pale yellow
Odor	Nauseating
Taste	Bland & slightly acrid
Solubility	Soluble in chloroform, benzene; Sparingly soluble in alcohol, Insoluble in water
Chemical constituents	
Fatty acids, Anthraquinone, glycoside, Flavonoid, Alkaloid, Protein, Vitamin, Cholesterol, Saponin, Terpene, Tannin, Carbohydrate, Resin, Steroid	

Benefits of Bala taila in gynecology

Many definitions have been given for word Stree but the most accepted is one who can keep fetus. This emphasizes on the importance of reproductive function of women. During the past few decades, there has been a growing recognition of reproductive health issues in women. In Ayurveda texts, basic principal of treatment for all gynecological complaints is vata regulation. Bala Taila is said Sarvavata Vikaranutta⁷ (Pacifying all vata disorders) which points towards its usage in management of gynecological complaints. Thus, local application of Bala taila as pichu (Oil soaked swab) and basti (Enema) is treatment of choice in disease like prolapse, asrigdara (Abnormal uterine bleeding), cervicitis, vaginitis, pelvic inflammatory disease etc. One of its benefits explained in texts is its use in Bandhya⁸ (Infertile) or Garbhaarthani⁹ (women who wants to conceive) which make it an appropriate drug for infertility.

Benefits of Bala taila in obstetrics

Women's health is a basic need for society as it affects the progeny. Pregnancy and labor are major events in the reproductive life of women. So, care of a mother before and during pregnancy and during puerperium is essential for safe motherhood and healthy childhood. Every year, at the global level, some eight million women suffer pregnancy-related complications and over half a million die, 99% of them in the developing countries¹⁰. In terms of the maternal mortality ratio (MMR), the world figure is estimated to be 400 per 100,000 live births^{11,12}.

Sagarbha (Pregnant women): Anuvasana Basti (Oil rich enema) with Bala Taila is given in 8th and 9th month of Sagarbhakala (Pregnancy) which regulates Apana Vayu (Type of Vata) and helps to ease the labor. which is the ultimate goal of whole Paricharya (Regime) explained in Ayurveda.

Anuvasana Basti (Oil rich enema) with Bala Taila: Apana Vayu (Type of vata) is responsible for the Garbha Nishkramana (expulsion of fetus)¹³. The Vyana vayu (Another type of vata) is essential for Prasara & Aakunchana of Garbhashya (contraction & retraction of myometrium)¹⁴. So, the Vyana & Apana vayu have an important role in the fetal expulsion. To keep these two vata in balanced state, Acharya have advised administration of Anuvasana-Basti & Pichu. Most women experience constipation in late pregnancy due to pressure of gravid uterus over the bowel and effect of progesterone. Use of Anuvasana Basti relieves constipation.

Sutika (Puerperium): Sutika Kala begins soon after expulsion of placenta. In Sutika Paricharya, Abhyanga (Massage) with Bala Taila has been advocated by different Acharya.

Sushruta¹⁵: Bala Taila Abhyanga prior to Ushnodaka Parisheka (Hot water bath).

Vagbhata-I¹⁶: Prior to Ushnodaka Parisheka

Vagbhata-II¹⁷: Massage of even yoni along with body.

Kashyapa¹⁸: Puerperal women should always sit over small chair covered with leather bag filled with hot Bala Taila.

Abhyanga with Bala Taila: Abhyanga means application of oil or unctuous substances on entire body or body part with optimum pressure and in particular directions and applying the strokes^{19,20}. In the properties of Bala Taila, its benefit in Mathita (Cramped), Shrmabhipanna (Tired) has been given which is the general condition of a woman after labor. Abhyanga with Bala Taila tones up pelvic floor, abdominal & back muscles and relieves muscle spasm. It helps in recovering from soft tissue injury by increasing blood circulation. Thrombosis can be prevented by Abhyanga as rubbing and friction improves venous blood flow by dilating superficial blood vessels²¹.

Benefits of Bala Taila in Neonate health^{22,23}

Bala Taila is the best remedy for newborn Abhyanga as given by Acharya in Navjata Shishu Paricharya²⁴ (Newborn care). Bala Taila increases the strength and nutrition of tissues thus improves growth of infant. Massage in infancy is helpful to prevent hypothermia and induce post-massage sleep²⁵. Moderate massage pressure has contributed to many positive effects including increased weight gain in preterm infants, enhanced attentiveness, increased vagal activity, decreased cortisol levels and enhanced immune function²⁶.

Pharmacological activity of contents of Bala Taila

The leaves of Bala contain small quantities of ephedrine and pseudoephedrine²⁷, roots and seeds contain alkaloid ephedrine, vasicinol, vasicinone and N-methyl tryptophan²⁸. Due to ephedrine, it is used for fat loss, increase energy, analgesic, anti-inflammatory, and hypoglycemic activities. In the experimental study root extract of *Sida cordifolia* shows Analgesic, Anti-inflammatory and Hypoglycaemic activities²⁹, leaf extract shows antimicrobial activity on *Staphylococcus aureus*, *Enterococcus faecalis*, *Pseudomonas aeruginosa*, *Candida albicans*³⁰. These qualities make Bala Taila appropriate for usage in reproductive and child health.

CONCLUSION

Ayurveda is not only the science of treatment but also a lifestyle modification. Ayurveda texts have explained use of Bala Taila in treatment of Stree roga as well as Garbhini, Sutika & Shishu Paricharya. This proves its efficacy in reproductive and child health care. Practical application of Bala taila is done in different stages of women life for gynecological health, safe motherhood, easy labor, uneventful puerperium and maintaining health of neonate.

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