



Review Article

THE ROLE OF PRUTHKPARNYADI GANA WITH SPECIAL REFERENCE TO COMPLICATIONS IN PREGNANCY

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ABSTRACT

Pregnancy is a wonderful moment as to give birth to new live. Physiological changes during pregnancy may lead to complication of both mother and baby. Among these preeclampsia, eclampsia and epilepsy are major cause of maternal mortality in developed and developing countries causing perinatal morbidity and mortality with foetal growth retardation. In Ayurveda, complications in pregnancy are not mentioned specifically. *Masanumasik Paricharaya* for *Garbhini* (regimen for the pregnant woman) is mentioned, which helps to prevent and cure disease and maintain health of mother and foetus. Pre-eclampsia and eclampsia mostly occurs after 20 weeks of gestation. During pregnancy mostly *Madhura* (sweet) *Rasa* drugs are used while in 6th and 7th month of pregnancy *Acharya Sushruta* has mentioned *Gokshur* and *Pruthkparnyadi Gana* additionally. Plants reviewed showed antiepileptic, anti-hypertensive, nootropic, anti-inflammatory, anti-oxidant, rejuvenative, diuretics, and cardio protective properties, which are helpful in safe and natural management of complications in pregnancy. So there is definite role of above drugs. Hence an attempt has been made to elaborate the role of these drugs in complications during pregnancy.

INTRODUCTION

Pregnancy is a wonderful moment as to give birth to new live. During pregnancy many physiological and hormonal changes occurs which may lead to complication of both mother and baby. Pregnancy induced hypertension i.e., PIH with pre-eclampsia, eclampsia and epilepsy are major cause of maternal mortality in developed and developing countries. It is also a major cause of perinatal morbidity and mortality with foetal growth retardation.

The incidence of preeclampsia is reported to be 8-10% among the pregnant women. According to a study, the prevalence of hypertensive disorders of pregnancy was 7.8% with preeclampsia in 5.4% of the study while eclampsia accounts for 12% of all maternal deaths in developing countries. In a study from a large

population in India, out of 4925 live births during the study period, there were 158 women with eclampsia, giving an incidence of 3.2%.^[1] In the United Kingdom, 15.5% of direct maternal deaths were due to the hypertensive disorders of pregnancy and more than half of these women had eclampsia, in which case fatality ratio of almost one in 50 was observed.^[2]

PIH is initial phase in pregnancy. In pre-eclampsia, hypertension and proteinuria are present and when convulsions occur in addition to these, the condition is referred as eclampsia. HELLP syndrome and eclampsia are the serious complications of the preeclampsia which is usually attributable to cerebral haemorrhage in patients with thrombocytopenia. Majority of deaths related to pre-eclampsia and eclampsia could be avoided by timely and effective antenatal care and hospital delivery.

In Ayurveda, pre-eclampsia, eclampsia and epilepsy in pregnancy are not mentioned specifically. *Acharya Harita* only mentioned *Shoph* (oedema) during pregnancy as *Garbhodrava* (complications developed in pregnant women due to foetus.). When *Garbhini* (pregnant women) follows *Ahitakar* (bad) *Aahar* (diet) and *Vihar* (daily activities) i.e., *Garbhoghhatkar Bhav* (factors that are responsible for

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abnormalities of the foetus) it leads to diseases in *Garbhini*. In Ayurveda, *Masanumasik Paricharaya* for *Garbhini* is mentioned which helps to prevent and cure disease and maintain health of mother and foetus. In *Masanumasik Paricharaya*, different drugs are used in every month. During pregnancy mostly *Madhura Rasaa* drugs are used, while in 6th and 7th month of pregnancy Acharya *Sushruta* mentioned *Gokshur* and *Pruthkparnyadi Gana* drugs additionally. The incidence of pre-eclampsia, eclampsia and also epilepsy mostly occurs after 20 weeks of gestation. So there is definite role of above drugs. Hence an attempt has been made

Results

to elaborate the role of these drugs in complications during pregnancy.

AIM

To review role of *Pruthakparnyadi Gana* in complication of pregnancy

MATERIAL AND METHODS

Materials related to complications in pregnancy, *Garbhini Paricharaya* and medicinal plants useful in pregnancy have be reviewed from different Ayurvedic books and modern text, authentic websites (PubMed, Google Scholars, Scopus etc.).

Table 1: *Garbhini Paricharaya*

Month	<i>Charaka Samhita</i> ^[3]	<i>Sushruta Samhita</i> ^[4]	<i>Ashtanga Sangraha</i> ^[5]	<i>Harita Samhita</i> ^[6]
First	Non medicated milk	<i>Madhura, Sheeta</i> (cold potency) liquid diet	Medicated milk	<i>Madhuyashti, Parushaka, Madhuk Pushpa</i> with honey and butter with <i>Madhura Rasa</i> milk <i>Anupana</i> (adjuvant)
Second	Milk medicated with <i>Madhura Rasa</i> drug	<i>Madhura, Sheeta</i> liquid diet	Milk medicated with <i>Madhura Rasa</i> drug	Milk medicated with <i>Kakoli</i>
Third	Milk with honey and <i>Ghrita</i> (clarified butter)	<i>Madhura, Sheeta</i> liquid diet, cooked <i>Shashti</i> rice with milk	Honey and <i>Ghrita</i>	<i>Krushra</i>
Fourth	Milk with butter or one <i>Aksh</i> (12 grams) extracted butter from milk	Cooked <i>Shashti</i> rice with curd	Milk with one <i>Aksh</i> butter	Medicated cooked rice
Fifth	<i>Ghrita</i> prepared with butter extracted from milk	Cooked <i>Shashti</i> rice with milk	<i>Ghrita</i> prepared with butter extracted from milk	<i>Paayasa</i>
Six	<i>Madhura Varga</i> medicated <i>Ghrita</i>	<i>Ghrita</i> medicated by <i>Gokshur</i>	<i>Madhura Varga</i> medicated <i>Ghrita</i>	Sweet curd
Seven	<i>Madhura Varga</i> medicated <i>Ghrita</i>	<i>Ghrita</i> medicated by <i>Pruthakparnyadi Gana</i>	<i>Madhura Varga</i> medicated <i>Ghrita</i>	<i>Ghritakhanda</i>
Eight	Rice prepared with milk and mixed with <i>Ghrita</i>	<i>Aasthapan Basti</i> and <i>Anuvasana Basti</i>	<i>Aasthapan Basti</i> and <i>Anuvasana Basti</i>	<i>Ghritapooraka</i>
Nine	<i>Madhura</i> drug <i>Anuvasana Basti, Pichu Dharana</i> (vaginal tampon)	<i>Aasthapan Basti, Madhura Snigdha Aahar</i>	<i>Madhura</i> drug <i>Anuvasana Basti, Pichu Dharana</i>	Different varieties of food

Pruthakparnyadi gana

Drugs: Total 20 plants were mentioned in the *Gana* (Table 2). Here Acharya *Sushruta* has mentioned that if *Jivaka* and *Rishbhaka* not available then should take *Guduchi* and *Vanshlochana* respectively as *Abhav- Pratinidhi* drug. As per *Bhavamishra*, *Vidarikanda* can be the *Abhav- Pratinidhi* for both *Dravyas*.

Doshghnata: *Pitta- Vata Shamak* (pacifying)

Vyadhi (diseases): *Rajayashma, Gulma, Angamard, Urdhvasvas* and *Kasa*

Table 2: Ayurvedic properties of Pruthkparnyadi gana drugs

S. no.	Plant name	Botanical name	Family	Rasaapanchak	Guna	Doshagnata
1.	Vidaarigandha ^[7] (Shaliparni)	<i>Desmodium gangeticum</i> DC	Fabaceae	Rasa- Madhura, Tikta (bitter) Vipak (post digestive effect)- Madhura Veerya (potency)- Ushna (hot)	Guru (heavy), Snigdha (unctuous), Ushna,	Tridoshar (pacifying)
2.	Vidaari ^[8]	<i>Vidarikanda</i> (Alpakshira) <i>Pueraria</i> <i>tuberosa</i> DC. <i>Kshirvidari</i> (Bahu kshira)- <i>Ipomea digitata</i> Linn.	Fabaceae Passifloraceae	Rasa- Madhura Vipak- Madhura Veerya - Sheeta	Guru, Snigdha	Vatapittahar
3.	Vishwadeva ^[9]	<i>Grewia populifolia</i> Vahl. [<i>Grewia tenex</i> (Forssk.) Fiori]	Tiliaceae	Rasa- Madhura Vipak- Madhura Veerya- Sheeta	Laghu (light), Snigdha Picchilla (slimy)	Vatapittahar
4.	Sahadeva/ Balabheda ^[9]			Rasa- Madhura Vipak- Madhura Veerya- Sheeta	Laghu, Snigdha Picchilla	Vatapittahar
5.	Swadamshttra ^[10] Gokshur	<i>Tribulus terrestris</i> Linn.	Zygophyllaceae	Rasa- Madhura Vipak- Madhura Veerya- Sheeta	Guru, Snigdha	Vatapittahar
6.	Prithakparni (Prushniparni) ^[11]	<i>Uraria Picta</i> Desv.	Fabaceae	Rasa- Madhura, Tikta Vipak- Madhura Veerya- Ushna	Laghu, Snigdha	Tridoshar
7.	Shatavari ^[12]	<i>Asparagus racemosus</i> Willd.	Liliaceae	Rasa- Madhura, Tikta Vipak- Madhura Veerya- Sheeta	Guru, Snigdha	Vatapittahar
8.	Saariva ^[13]	<i>Hemidesmus indicus</i> R.Br.	Periplocaceae	Rasa- Madhura, Tikta Vipak- Madhura Veerya- Sheeta	Guru, Snigdha	Tridoshar
9.	Krushna saariva ^[13]	<i>Cryptolepis buchanani</i> Roem and Schult.	Periplocaceae	Rasa- Madhura, Tikta Vipak- Madhura Veerya- Sheeta	Guru, Snigdha	Tridoshar
10.	Jivaka ^[14]	<i>Microstylis wallichii</i> Lindll	Orchidaceae	Rasa- Madhura Vipak- Madhura Veerya- Sheeta	Snigdha Picchilla	Vatapittahar
11.	Rishbhaka ^[9]	<i>Microstylis mucifera</i> Ridley.	Orchidaceae	Rasa- Madhura Kashaya	Snigdha Laghu	Vatapittahar

				<i>Vipak- Madhura Veerya- Sheeta</i>		
12.	<i>Mahasaha</i> ^[15]	<i>Teramnus labialis</i> Spreng.	<i>Fabaceae</i>	<i>Rasa- Madhura, Tikta Vipak- Madhura Veerya- Sheeta</i>	<i>Laghu, Snigdha</i>	<i>Vatapittahar, Kaphavardhak (increasing)</i>
13.	<i>Kshud Rasaaha</i> ^[15]	<i>Phaseolus trilobus</i> Ait.	<i>Fabaceae</i>	<i>Rasa- Madhura, Tikta Vipak- Madhura Veerya- Sheeta</i>	<i>Laghu, Snigdha</i>	<i>Vatapittahar, Kapha Vardhak</i>
14.	<i>Bruhati</i> ^[16]	<i>Solanum indicum</i> Linn.	<i>Solanaceae</i>	<i>Rasa- Katu (pungent), Tikta Vipak- Katu Veerya-Ushna</i>	<i>Laghu, Ruksha (dry), Tikshna (sharpness)</i>	<i>Kaphavata Shamak</i>
15.	<i>Kantakari / Bruhati (small)</i> ^[17]	<i>Solanum xanthocarpum</i> Schr. And Wendle	<i>Solanaceae</i>	<i>Rasa- Katu, Tikta Vipak- Katu Veerya- Ushna</i>	<i>Laghu, Ruksha, Tikshna</i>	<i>Kaphavata Shamak</i>
16.	<i>Punarnava</i> ^[18]	<i>Boerhaavia diffusa</i> Linn.	<i>Nyctaginaceae</i>	<i>Rasa- Madhura, Tikta, Kashaya Vipak- Madhura Veerya- Ushna</i>	<i>Laghu, Ruksha</i>	<i>Tridoshar</i>
17.	<i>Eranda</i> ^[19]	<i>Ricinius communis</i> Linn.	<i>Euphorbiaceae</i>	<i>Rasa- Madhura, Anurasa-Katu, Kashaya Vipak- Madhura Veerya- Ushna</i>	<i>Snigdha, Tikshna, Sukshma (subtle)</i>	<i>Kaphavatahar</i>
18.	<i>Hamsapadi</i> ^[20]	<i>Adiantum lunulatum</i> Burn.	<i>Adiantaceae</i>	<i>Rasa- Kashaya Vipak- Madhura Veerya- Sheeta</i>	<i>Guru</i>	<i>Kaphapittasha mak</i>
19.	<i>Vrishchikali</i> ^[21]	<i>Pergularia extensa</i> N.E. Br.	<i>Periplocaceae</i>	<i>Rasa- Katu, Kashaya Vipak- Katu Veerya-Anushna</i>	<i>Laghu, Ruksha, Vishad (helps in cleaning)</i>	<i>Kapha Nisaraka (alleviating)</i>
20.	<i>Rishabhi</i> ^[22] (<i>Kapikachchu</i>)	<i>Mucuna pruriens</i> DC.	<i>Fabaceae</i>	<i>Rasa- Madhuraa, Tikta Vipak- Madhura Veerya-Ushna</i>	<i>Guru, Snigdha</i>	<i>Vatahar, Kapha Pitta Vardhak</i>

Table 3: Ayurvedic Karma with modern therapeutic uses

S.no.	Plant name	Ayurvedic Karma	Therapeutic use
1.	<i>Vidaarigandha</i>	Mootral (diuretic), <i>Angamard Prasahaman</i> (body pain alleviating), <i>Balya</i> (strength enhancing), <i>Bruhana</i> (nutritive), <i>Rasaayana</i> (rejuvenative), <i>Vrushya</i> (aphrodisiac), <i>Snehopaga</i> (helpful in oleation), <i>Shothhara</i> (ant-inflammatory), <i>Hrudya</i> (cardio-protective), <i>Chardihara</i> (antiemetic), <i>Jwarhara</i> (anti-pyretic), <i>Shwashara</i> (cures	Antileishmanial, immunomodulatory, antiasthmatic, smooth muscle relaxant, anti-inflammatory, anti-ulcer, cardio-protective, antidiabetic, anti-amnesic, antiviral, antioxidant and hepatoprotective activities. ^[23] Nootropic activity ^[24]

		breathlessness), <i>Kasahara</i> (cures cough), <i>Atisarahara</i> (anti-diarrhoeal), <i>Prameha</i> (anti-diabetic), <i>Arshahara</i> (cures haemorrhoids), <i>Santaapanashini</i> (cures burning sensation), <i>Shonitsthapan</i> (anti haemorrhagic), <i>Vishahara</i> (anti-toxic) ^[7]	
2.	<i>Vidaari</i>	<i>Balya</i> , <i>Bruhaniya</i> , <i>Vranya</i> (wound healing), <i>Kanthy</i> (good for throat), <i>Snehopaga</i> , <i>Hryudya</i> , <i>Shonitasthapan</i> , <i>Vrushya</i> , <i>Stanyajanan</i> (galactagogue), <i>Mootral</i> (<i>Atimootral</i>), <i>Shukrala</i> (sperm enhancing), <i>Jivaniya</i> (life prolonging), <i>Rasaayana</i> , <i>Vishamajwar</i> (anti-pyretic) ^[8]	Anticancer, anticonvulsant, antidiabetic, antifertility, anti-inflammatory, antioxidant, anti-stress, antiulcerogenic, cardioprotective, hypolipidemic, hepatoprotective, immunomodulatory, nephroprotective, nootropic, neuroprotective, wound healing. ^[25]
3.	<i>Vishwadeva</i>	-	-
4.	<i>Sahadeva</i>	-	-
5.	<i>Swadamshtra</i>	<i>Mootrvirechniya</i> (restores normal colour of urine), <i>Mootrala</i> , <i>Bastishodhana</i> (clears obstruction of bladder), <i>Shothhar</i> , <i>Krumighna</i> (anti-worm), <i>Balya</i> , <i>Hrudya</i> , <i>Raktapittashamaka</i> (anti-haemorrhagic), <i>Kasahara</i> , <i>Swashara</i> , <i>Arshoghna</i> ^[10]	Diuretic effect, analgesic activity, antihypertensive property, antioxidant property, anti-bacterial effect, hypoglycemic, hypolipidemic effects, antitumor activity ^[26] , neuroprotective effect ^[27]
6.	<i>Prithakparni</i>	<i>Angamarda Prasahaman</i> , <i>Vrushya</i> , <i>Shothhar</i> , <i>Hrudya</i> , <i>Jwaraghna</i> , <i>Dahahara</i> , <i>Shwashara</i> , <i>Kasahara</i> , <i>Rakta Atisarahara</i> (cures bloody diarrhoea), <i>Raktvikarhara</i> (helps in diseases arising due to impure blood), <i>Astisandhankara</i> (healing of bones fracture), <i>Sandhanniya</i> . <i>Dipana</i> (increases appetite), <i>Unmadhara</i> (anti-psychotic) ^[11]	Anti-Convulsive Activity ^[28]
7.	<i>Shatavari</i>	<i>Mootral</i> , <i>Shoth</i> , <i>Balya</i> , <i>Bruhana</i> , <i>Rasaayana</i> , <i>Vrushya</i> , <i>Hrudya</i> , <i>Gulma</i> , <i>Atisarahara</i> , <i>Shukrakar</i> , <i>Stanyakar</i> , <i>Grahani</i> , <i>Arshoghna</i> , <i>Medhya</i> , <i>Netrya</i> (good for eyes), <i>Apasmar</i> (anti-epileptic) ^[12]	Antioxidant, diuretic, anti-depressant, antiepileptic, anti-tussive, anti-hiv, immunostimulant, hepatoprotective, cardio-protective, antibacterial, antiulcerative, neurodegenerative ^[29]
8.	<i>Sariva</i>	<i>Skand</i> , <i>Apasmar</i> , <i>Vaatvyadhi</i> , <i>Stanyashodhana</i> (improves quality of breast milk), <i>Purishsangraniya</i> (antidiarrheal), <i>Jvarahar</i> , <i>Dahaprasahaman</i> , <i>Shothahar</i> , <i>Vrushya</i> , <i>Garbhasthaapana</i> (helps to maintain the implantation of embryo), <i>Mootrajanan</i> , <i>Mootravirajaniya</i> , <i>Rasaayana</i> , <i>Vishaghna</i> , <i>Swashara</i> , <i>Kasahrara</i> , <i>Agnimandyahara</i> (improves digestive fire), <i>Atisarahara</i> , <i>Pramehaghna</i> ^[13]	Analgesic, anti-inflammatory, antipyretic, antiarthritic, antioxidant, hepatoprotective, nephroprotective, antiepileptic, anticonvulsant, antipsychotic, nootropic, antinociceptive, antidiarrhoeal, anti-hyperlipaedaemic, antimicrobial anticarcinogenic activities ^[30]
9.	<i>Krushna- Sariva</i>	<i>Skand</i> , <i>Apasmar</i> , <i>Vaatvyadhi</i> , <i>Stanyashodhana</i> , <i>Purishsangraniya</i> , <i>Jvarahar</i> , <i>Dahprasahaman</i> , <i>Shothahar</i> , <i>Vrushya</i> , <i>Garbhasthaapana</i> , <i>Mootrajanan</i> , <i>Mootravirajaniya</i> , <i>Rasayana</i> , <i>Vishaghna</i> , <i>Swashara</i> , <i>Kasahara</i> , <i>Agnimandyahara</i>	-

		(improves digestion), <i>Atisaraghna</i> , <i>Kushtaghna</i> (cures skin diseases), <i>Pramehaghna</i> , ^[13,14]	
10.	<i>Jivaka</i>	<i>Balya</i> , <i>Pittahara</i> , <i>Rasayana</i> , <i>Vatahara</i> , <i>Dhatuvarhdhaka</i> (rejuvenation), <i>Mootrala</i> , <i>Bruhana</i> , <i>Snehopaga</i> , <i>Jivaniya</i> , <i>Kasahara</i> , <i>Swasahara</i> , <i>Kshayaghna</i> (cures Phthisis), <i>Shoshghna</i> (helps in emaciation), <i>Raktapitta</i> ^[14]	Antimicrobial, anti-inflammatory antioxidant, anticancer activity antipyretic, antimutagenic, anticonvulsive, antihelminthic anti-hepatotoxic, wound healing anti-platelet, antidiabetic, immunomodulatory activity, pain relieving, antiviral, herbicidal agent ^[31]
11.	<i>Rishbhaka</i>		-
12.	<i>Mahasaha</i>	<i>Jivaniya</i> , <i>Shukrajanan</i> , <i>Balya</i> , <i>Pushtivardhana</i> , <i>Vrushya</i> , ^[15]	-
13.	<i>KshudRasaaha</i>	<i>Jivaniya</i> , <i>Shukrajanan</i> , <i>Balya</i> , <i>Pushtivardhana</i> , <i>Vrushya</i> , <i>Chakshushya</i> ^[15]	-
14.	<i>Bruhati</i>	<i>Vedanasthapaka</i> , <i>Shothahar</i> , <i>Krumighna</i> , <i>Sandnyaprabodaka</i> , <i>Kasahar</i> , <i>Kanthyha</i> , <i>Hikkanigrahana</i> , <i>Swashar</i> , <i>Mootral</i> , <i>Jwaraghna</i> , <i>Apatantra</i> (cures spasmodic contractions), <i>Apasmara</i> , <i>Garbhasthapaka</i> , <i>Vajikarana</i> ^[16]	Hepatoprotective, anti-oxidant, cardio tonic ^[32] , anti-hypertensive ^[33] , anti convulsant ^[34] , diuretic ^[35]
15.	<i>Kantakari / Bruhati (small)</i>	<i>Vedanasthapaka</i> , <i>Shothahar</i> , <i>Krumighna</i> , <i>Sandnyaprabodaka</i> (cures syncope), <i>Kasahar</i> , <i>Kanthyha</i> , <i>Hikkanigrahana</i> (cures hiccups), <i>Swashar</i> , <i>Mootral</i> , <i>Jwaraghna</i> , <i>Apatantra</i> , <i>Apasmara</i> , <i>Garbhsthapaka</i> , <i>Vajikarana</i> ^[17]	Diuretic ^[36] , Anti convulsant, ^[37] Cardio protective ^[38]
16.	<i>Punarnava</i>	<i>Shoph</i> , <i>Pandu</i> , <i>Hrudroga</i> , <i>Kas</i> , <i>Raktapradarhara</i> (menorrhagia), <i>Udarhara</i> (cures ascites), <i>Mootral</i> , <i>Nidrakar</i> (sleep inducing), <i>Rasaayana</i> , <i>Jvarghna</i> , <i>Kushtghna</i> ^[18]	Diuretic, Antistress And Adaptogenic Activity Antioxidant Anti Hypertensive ^[39]
17.	<i>Eranda</i>	<i>Jvar</i> , <i>Kas</i> , <i>Shoth</i> , <i>Udar</i> , <i>Gulma Hrudroga</i> , <i>Medhavardhana</i> , <i>Kantivardhana</i> , <i>Smruti Vardhana</i> , <i>Balya</i> , <i>Swas</i> , <i>Krumighna</i> , <i>Kushtaghna</i> , <i>Vataraktahara</i> (cures gout), <i>Gulmahara</i> , <i>Arshoghna</i> , <i>Aamavatghna</i> (cures rheumatoid arthritis), <i>Netravikar</i> , <i>Kamalahara</i> (cures hepatitis), <i>Virechana</i> , <i>Mootral</i> ^[19] .	The Anticonvulsant Activity ^[40] Anticancer, Antimicrobial, Antioxidant, Anti-Diabetic, Antinociceptive, Anti-Inflammatory, Analgesic, Anticonvulsant Activity ^[41] . Hepatoprotective ^[42]
18.	<i>Hamsapadi</i>	<i>Apasmar</i> , <i>Bhramanaashini</i> , <i>Raktavikarhara</i> , <i>Vishghna</i> , <i>Visarpahara</i> (cures herpes), <i>Daha</i> , <i>Atisara</i> , <i>Rasaayani</i> , <i>Kanthyha</i> ^[20]	Hepatoprotective Antioxidant Activities ^[43]
19.	<i>Vrishchikali</i>	<i>Shoth</i> , <i>Mootrakruch</i> , <i>Jvarahara</i> , <i>Pramehaghna</i> , <i>Sandhivathara</i> , <i>Udarhara</i> , <i>Apasmar</i> , <i>Kasahara</i> , <i>Shwashara</i> , <i>Vranaropan</i> , <i>Krumighna</i> , <i>Kushtaghna</i> , <i>Arshoghna</i> ^[21]	Antiepileptogenic, Antioxidant, Neuroprotective ^[44] Diuretic Activity ^[45] Antiinflammation, Analgesic, Antipyretic, Antioxidant, Anticancer, Antidiabetic, Hepatoprotective, Antibacterial, Antifungal ^[46]

			Cardiotonic ^[47]
20.	<i>Rishabhi</i>	<i>Balya, Bruhana, Vrushya, Raktapittaghna, Vajikarana, Smrutivardhana, Stanyakar, Shukrakara, Atisarghna, Shatakshin, Unmadhara, Vatavyadhi, balaprad^[22]</i>	Neuroprotective, Anti-Parkinson Drug, Anti-Epileptic, Anti Oxidant ^[48] Learning And Memory Enhancement (Nootropic Activity ^[49] Anti Hypertensive ^[50] Anxiolytic, Antidepressant Anticonvulsant Activity ^[51]

Table 4: list of plants with specific *Karmas*

Karma	Drugs name
<i>Mootral</i> (Diuretic)	<i>Vidaarigandha, Vidaari, Swadamshttra, Shatavari, Saariva, Krushna Saariva, Jivaka, Bruhati, Kantakari, Punarnava, Eranda, Vrishchikali</i>
<i>Balya</i> (strength promoting)	<i>Vidaarigandha, Vidaari, Swadamshttra, Shatavari, Saariva, Krushna Saariva, Jivaka, Eranda, Rishabhi</i>
<i>Bruhana</i> (Nourishing)	<i>Vidaarigandha, Vidaari, Swadamshttra, Shatavari, Saariva, Krushna Saariva, Rishabhi</i>
<i>Rasaayana</i> (Rejuvenation)	<i>Vidaarigandha, Vidaari, Shatavari, Saariva, Krushna Saariva, Jivaka, Punarnava, Hamsapadi, Vrishchikali</i>
<i>Hrudya</i> (cardioprotective)	<i>Vidaarigandha, Vidaari, Swadamshttra, Shatavari, Saariva, Krushna Saariva, Punarnava, Eranda</i>
<i>Medhya</i> (Nootropic)	<i>Vidaarigandha, Vidaari, Swadamshttra Shatavari Saariva, Krushna Saariva, Eranda, Rishabhi</i>
<i>Shothhar</i> (anti-inflammatory)	<i>Vidaarigandha, Vidaari Swadamshttra Shatavari Prithakparni Saariva, Krushna Saariva, Jivaka, Bruhati, Kantakari, Punarnava, Eranda, Vrishchikali, Rishabhi</i>

DISCUSSION

➤ Complications in pregnancy can be related to pregnancy or pre-existing condition or sometimes may detected for the first time. Hypertension is very common in pregnancy but PIH with seizures i.e. Eclampsia is unique to pregnancy. Historically when observed, starting stage is pre eclampsia, where Hypertension with protein urea is developed if not treated further get complicated with seizures, where severe hypertension with proteinuria or oligouria and elevated liver enzymes i.e., HELLP syndrome is observed. Which may develop neurological disorder in pregnant women. There are three different phase of neurological disorder.^[52]

1. Pre-existing condition like epilepsy or multiple sclerosis,
2. Symptoms observed with increased incidence during pregnancy e.g. cerebrovascular disease and peripheral nerve compression syndromes.
3. Symptoms exclusively seen in pregnancy e.g. pre-eclampsia, eclampsia and amniotic fluid embolism

The diagnosis and management of the neurological disorders in pregnancy is always challenging with risks to the foetus. During pregnancy when seizures occur, it affects both mother and foetal health. It shows

increased rates of non-protein uric hypertension, fetal cardiovascular malformations, cleft lip and cleft palate, foetal hypoxia, foetal injury, premature placental abruption or miscarriage due to trauma (such as a fall, during a seizure), Preterm labour, Premature birth, IUGR, malnourishment of baby with mild to moderate mental retardation, developmental delay. If mother is epileptic then there is chances of producing an offspring with a seizure disorder. Which is high risk factor in pregnancy. So appropriate care is required during preconception, pregnancy, delivery and after delivery.

➤ In pre-existing epileptic history, Anti-epileptic drugs (AED) is first line of treatment but in previous studies it was observed that AEDs is associated with an increased risk of major congenital malformations, obstetrical and neonatal complications, impaired behavioral and cognitive development in the child. The complications related to this may increase as a result of changing or stopping AED treatment.^[53]

When the neurological disorder associated with early diagnostic tools like pre-existing history of epilepsy, primary tool like Pregnancy induced hypertension, pre eclampsia, severe pre eclampsia, proteinuria and eclampsia (hypertension with

seizures) line of treatment gets changed. Here Anti-hypertensive, Anti-inflammatory, Anti convulsive, Anti-epileptic and Diuretics drugs are mostly used. These drugs lower the hypertension, reduce oedema, control proteinuria and help to control seizures, but there is some limitation to this.

- In *Ayurveda*, *Garbhini Parichraya*, *Garbhini Avastha* and *Garbhav Kranti* (foetal development) have well documented but complication related to (pregnancy) *Garbhini* is not elaborated in detail. Acharya Harita explained *Garbhodrava* as disorder in *Garbhini*. Here *Shoph* is described mostly in 6th 7th 8th and 9th month of pregnancy which is mostly correlated with signs of PIH, pre eclampsia and eclampsia. Epilepsy is mostly correlated with *Apasmara*. *Apasmara* is defined as the transient appearance of unconsciousness with derangement of memory, intelligence and mind. Unhealthy diet and lifestyle habit vitiate *Doshas*, these vitiated *Doshas* goes to the *Strotasa* (Channels) and develop symptoms like infliction of mind with *Rajas* and *Tamas* which develops anxiety, passion, fear, anger, and grief agitation also shows effect on heart. Hence to maintain health, proper *Aahar* and *Vihar* required hence Acharya mentioned *Garbhini Paricharaya*.
 - During 1st trimester, pregnant women experience nausea and vomiting, thus cannot take proper diet. So in this *Acharyas* mentioned Use of cold and sweet liquid diet and milk In addition to this also advice to use *Madhuraa Rasaa* drugs which prevent dehydration and supply nourishment to mother and foetus both.
 - In 2nd trimester, 4th month onwards muscular tissue of foetus grow, *Garbha* becomes stable and dense, here the development of *Manas*, *Shonit* (blood) and *Snayu* (ligament) for to frame the body. Hence sufficiently requiring more protein which is supplied by use of meat soup and *Shashti Shali*. 5th month, Mind becomes well active by increased *Mansa* and *Shonita*. The blood and muscle tissue of the *Garbha* increases. Here *Acharya* mentioned the use of *Ghritha*, butter and *Shashti Shali*. *Ghritha* has karmas like *Agnidipana*, *Anabhisayandi*, *Ayushya*, *Balya*, *Cakshushya*, *Dipana*, *Hrudya*, *Kantiprada*, *Medhya*, *Ojovardhaka*, *Rasaayana*, *Rucya*, *Slesmavardhana*, *Snehana*, *Śukravardhaka*, *Tejobalakara*, *Tvacya*, *Vatapittaprasamana*, *Vayaasthpaana*, *Vishahara*, *Viryā* which help for development of foetus circulatory system specially.
- At 6th month, women suffer from oedema of feet and other complications of water accumulation. Hence *Acharya Sushruta* mentioned the Use of *Gokshura*. *Gokshura* has properties of *Mootral*

Karma (good diuretic) prevent water retention and its complications.

In the 3rd trimester – maximum growth and development of foetus occurs. But on the other hand hormonal level get changes which affect mother body. In study, it was found that in last trimester the frequency of seizures got increased [54]. That's why *Acharya* mention special group of drugs i.e. *Pruthakparnyadi Gana* in 7 month *Garbhini Paricharya*.

The drugs of *Vidarigandhadi* group are diuretic, anabolic, relive emaciation and suppress *Kapha* and *Pitta*, they help to prevent, to cure and in maintaining health of mother and foetus. Most women experience constipations during late pregnancy, hence use of liquid diet, *Ghritha* and these *Anulomak* drugs is recommended. [55]

- As the main *Dosha* is responsible in Eclampsia related symptoms *Vata* specially *Vyana Vayu*, *Sadhak Pitta* and *Rakta Dhatu*, *Majja Dhatu* and *Oja* gets vitiated.
- Maximum drugs in the *Pruthakparnyadi Gana* possess *Madhura Rasaa* and *Madhura Vipaka* with *Snigdha Guna* and *Sheeta Veerya*, which act on *Kapha* and give *Sthirata* to the Mind and body.
- In the present review as per *Ayurveda* text selected drugs shows properties of *Rakta Prasaadan*, *Anuloman*, *Hrudya*, *Medhya*, *Nidrajanan*, and *Vata Pitta Shamana* properties. Every *Vyadhi Samprapti* originates from *Agnimandya*. So drugs which improve *Dhatwagni*, improve digestion and metabolism. These drugs mainly acting on Liver like (hepato protective drugs) eg. *Vidarigandha*, *Vidari*, *Shtavari*, *Sariva*, *Bruhati*, *Jivaka*, *Eranda*, *Hanspadi* and *Vrushchikali* play important role in prevention and arrest the pathophysiology of the disease.
- *Apsmar/epilepsy* is prominent condition mostly occurring after 20 weeks of pregnancy. In this condition, drugs acting on *Hrudaya* & *Manovahastrotas* have important use by means of *Hrudya*, *Rasaayana*, *Medhya* and *Mootral Karma* with *Yakrutgamitva Karma*. *Vidaarigandha*, *Vidaari*, *Swadamshtra*, *Shatavari*, *Saariva*, *Krushna Saariva*, *Jivaka*, *Bruhati*, *Kantakari*, *Punarnava*, *Eranda*, *Vrushchikali* possess above mentioned all properties. These herbs helps in reduction of vitiated *Doshas* which ultimately helps in the get rid of hypertension. Most of the drugs from *Pruthakparnyadi Gana* are *Vatapittashamaka* by their properties they reduce *Avarodh* of *Pranvahastrotas* and give *Bala* to *Hrudaya*. Herbs in the group like *Gokshur*, *Shatavari*, *Bruhati*, *Kantakari*, *Punarnava* and *Vrushchikali* had proven Diuretic action by this they help in reduction of oedema, Hypertension and proteinuria etc.

- *Apsmar* being related with vitiation of *Manovaha Strotas*, drugs acting on cognition, anxiety or CNS Play important role in this condition. *Pruthakparnyadi Gana* contains *Vidarigandha*, *Vidari*, *Gokshur*, *Shtavari*, *Sariva*, *Punarnava*, *Erand*, *Vrushchikali* and *Vrushbhi* which showed Nootropic, Neuroprotective, Anti stress actions in various studies.
- By means of *Nidrajanana Karma* and *Medhya Karma*, anxiety gets reduced which ultimately helps in hypertension and Sizzures.
- In Eclampsia, *Manovikara Janya Lakashan* are seen. *Hrudaya* is a *Marma* and *Sthan* of *Man /Chetana* and *Oja Dhatu*. Drugs like *Vidarigandha*, *Vidari*, *Shatavari*, *Bruhati*, *Kantakari* and *Vrushchikali* are cardio-protective. These drugs by their action protect cardiac activity.
- In *Ayurveda*, *Rasaayana Karma* can be achieved through Anti-oxidant action. *Rasaayana* drugs help in production of all *Dhatu* in good quality & quantity. By virtue of this *Oja Dhatu* which is essence of all these *Dhatu*s is properly formed and restored. In this context *Bruhan* of *Majja Dhatu* and *Oja Dhatu* has prime importance. In *Apsmar*, *Ojakshaya* and *Ojavistravana Lakshna* are found. Drugs having properties of *Balya*, *Bruhan* and *Rasaayana* will help in maintain and restoration of *Oja*.
- *Acharya Shushruta* Mentioned *Pruthakparnyadi Gana* in *Garbhini Paricharya* and also in *Apsmar Chikitsa*^[56].
- In *Ayurveda*, separate medicine for Eclampsia or epilepsy in pregnancy are not mentioned. We can apply this reference for the management of this and can use this group effectively safely without any side effects and withdrawal symptoms.

CONCLUSION

- In *Garbhini Paricharaya*, drugs having properties of *Madhura Rasa*, *Madhura Vipaaka*, *Sheeta Veerya*, *Balya*, *Bruhana*, *Medya* and *Rasaayana* are good for both mother and foetal growth. On the other hand some drugs are mentioned with special medicinal properties which can tackle various health issues occurring during pregnancy. *Pruthakparnyadi gana* is one of them. Total 20 drugs are included, their properties of *Mootral*, *Balya*, *Bruhana*, *Rasaayana*, *Medhya*, *Smutijanan- Vardhan*, *Shothhara* and *Hyadya* etc. are correlated with an anti-convulsive, anti -hypertensive, nootropic, neuroprotective, diuretics and rejuvenitic properties. Hence *Pruthakparnyadi Gana* is more effective in complications of pregnancy.
- This review gives clear insight that *Pruthkparnyadi Gana* can be used in patient with history of epilepsy starting from preconception to delivery

and will be helpful to cure the disease and prevent further complications.

- Pregnant women with no history should also take *Pruthakparnyadi Gana* medicine, which will help in prevention of diseases ultimately can deliver healthy child.
- *Pruthkparnyadi Gana* drugs are safe and natural which are important in prevention and curative aspect without any side effect.

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