

**ROLE OF LAJJALU (MIMOSA PUDICA LINN.) IN YONIBHRANSHA W.S.R. PERINEAL LAXITY, CYSTOCELE AND UTERINE PROLAPSE: A REVIEW STUDY****Rohit Tiwari¹, Sucheta Ray², Krishna kumar Tiwari³, Priyanka Hajare⁴, Ekta Singh Parihar⁵**¹P.G. Scholar, Mansarovar Ayurvedic Medical College Hospital & Research Centre, Bhopal, Madhya Pradesh²Professor&HOD, Prasuti Tantra & Stri Roga Department, Mansarovar Ayurvedic Medical College Hospital & Research Centre, Bhopal Madhya Pradesh³Associate Professor, Samhita Siddhanta Department, Mansarovar Ayurvedic Medical College Hospital & Research Centre, Bhopal Madhya Pradesh⁴Assistant Professor, Prasuti Tantra & Stri Roga Department, Mansarovar Ayurvedic Medical College Hospital & Research Centre, Bhopal Madhya Pradesh⁵Assistant Professor, Prasuti Tantra & Stri Roga Department, Mansarovar Ayurvedic Medical College Hospital & Research Centre, Bhopal Madhya Pradesh**Corresponding Author:** rohittiwari9161@gmail.com<https://doi.org/10.46607/iamj1612112024>**(Published Online: November 2024)****Open Access**

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Article Received: 05/10/2024 - **Peer Reviewed:** 30/10/2024 - **Accepted for Publication:** 14/11/2024.**ABSTRACT**

Pelvic organs prolapse (POP) is one of the standard clinical conditions met in day-to-day OPDs, especially among parous women. The pelvic organ prolapse refers to protrusions of the pelvic organ into or out of the vaginal canal. The uterus typically has a limited range of movement. So, its position in the pelvis is affected by its neighbouring structures. The entity includes the descent of the vaginal wall and/or the uterus. Its prevalence is more than 50% of all gynaecological conditions. About a third of women over the age of 50, i.e. menopausal age, are affected to some degree. As per *Brihatrayi*, *Yoni branch* represents a symptom of *Prasramsini*, *Vatala* & *Phalini*, *mahayoni Yonivyapada*. To treat the ailment of women's reproductive health, *Sthanika chikitsa* is the best option. *Lajjalu swarasa*, described in the ayurvedic classics, is effective in the treatment of vaginal laxity as well as prolapse. The ageing process is reflected in the form of functional & structural weakness of the pelvic floor, which leads to

pelvic floor dysfunction (PFD). Lajjalu is the best option for increasing pelvic floor strength (PFS). The use of *sthanika chikitsa*, i.e., *Yonilepana*, *Yonipichu*, can help in treating vaginal laxity and future prolapse conditions; thus, by applying this, we can avoid hysterectomy. Therefore, we can preserve her uterus by using non-surgical alternatives.

Keywords: Hysterectomy, *Sankochini*, Turgorin, Actin, Colporrhaphy

INTRODUCTION

Pelvic organs prolapse (POP) is one of the common clinical conditions met in day-to-day OPDs, especially among parous women. The genital prolapse occurs due to laxity of the structures supporting the organs in position. The cystocele is formed by laxity and descent of the upper two-thirds of the anterior vaginal wall. As the bladder base is closely related to this area, the bladder is herniated through the lax anterior wall¹. Cystocele is formed among types of descent which complicate with symptoms of frequent micturition and, in others, by incomplete emptying of the bladder and feeling of mass per vagina. Initial degrees of vaginal prolapse can be co-related to *Phalini yoni* narrated in Ayurvedic classics. Our *Acharya* were well aware of pelvic organ prolapse and they have also told the preventive and conservative line of management for the same. Perineal laxity is weakness of tone/loss of tone, this weakness result in descent of cervix & vaginal wall from their normal position. The basic treatment principles of both *Ayurveda* and contemporary science remain same, both medical sciences give emphasis on re-positioning of prolapsed part. Contemporary science has given more stress upon surgical management by performing Anterior Colporrhaphy. When the degree of prolapse is mild then the conservative line of treatment which is said in *Ayurvedic* classics seems to be more beneficial, cost effective and more over it gives mental relief to the patient from the fear of surgery.

Prevalence rate -

The Women's Health Initiative study estimated that the prevalence of bladder prolapse is 34.3% for women with a uterus and 32.9% for women who have undergone a hysterectomy,² which affects their quality of life.

Aim-To study the *Lajjalu* in *Yonibhransha* (*Mimosa pudica* Linn.) w.s.r. Perineal laxity, cystocele and uterine prolapse.

Objectives-

- To assess the efficacy of *Lajjalu* in *Yonibhransha*.
- To understand the hypothetical mode of action of *Lajjalu swarasa* orally and local application as non-surgical alternatives.

Methodology –Relevant data is gathered using Ayurvedic *Samhita*, *brahtrayee*, *Nighantu*, modern text, journals, web source etc.

Description of bhransha³ (Pelvic organ prolapse) – Yoninalika Bhransha (Vaginal Prolapse)

Phalini - In this disease, anterior or posterior vaginal walls are prolapsed; it is a description of cystocele and rectocele.

Vatiki - *Acharya Vagbhata* has included displacement of *Yoni* in the clinical features of this disease, which appears to be a description of the laxity of the perineum.

Garbhashay bhransha⁴ (displacement of the uterus)

Prasransini This entity is characterised with downwards displacement of the uterus after irritation and difficult labour. This resembles first and second-degree uterine prolapse.

Mahayoni- Firmness and dilatation of the orifice of the uterus (cervix) and vagina, along with muscular protuberance, are the clinical features of this disease. This condition simulates third degree uterine prolapse or procedentia.

Description of Pelvic organ prolapse⁵

Pelvic organs prolapse (POP) is one of the common clinical conditions met in day-to-day gynaecological practice, especially among parous women. The entity

includes the descent of the vaginal wall and/or the uterus. The uterus is held in this position and at this level by support conveniently grouped under three-tier systems. The objective is to maintain the position and to prevent the descent of the uterus through the natural urogenital hiatus in the pelvic floor.

Vaginal Prolapse⁶

Anterior wall

Cystocele — The cystocele is formed by laxity and descent of the upper two-thirds of the anterior vaginal wall. As the bladder base is closely related to this area, the bladder is herniated through the lax anterior wall.

Urethrocele — When there is laxity in the lower third of the anterior vaginal wall, the urethra herniates through it. This may appear independently or usually along with cystocele and is called cystourethrocele.

Posterior wall

Relaxed perineum — The torn perineal body produces gaping introitus with the bulge of the lower part of the posterior vaginal wall.

Rectocele — There is laxity of the middle third of the posterior vaginal wall and the adjacent rectovaginal septum. As a result, there is herniation of the rectum through the lax area.

Nidana of Yonibhransha

1. Intake of excessive quantity of food and later indulge in coital act.
2. Intake of unhealthy foodstuffs
3. Intake of less quantity of food items
4. Sexual intercourse after taking full meals, in uneven places, in abnormal postures.
5. Coitus with young girls or women who are weak⁷.
6. With a history of prolonged and difficult labour.⁸

Samprapti

Aetiology of pelvic organ prolapse⁹

Anatomically-

- ❖ Gravitational stress is due to human bipedal posture.
- ❖ The anterior inclination of the pelvis directs the force more anteriorly.
- ❖ The stress of parturition (Internal rotation) causes maximum damage to puborectalis fibres of the levator air
- ❖ Pelvic floor weakness due to urogenital hiatus and the direction of obstetric axis through the hiatus
- ❖ The inherent weakness of the supporting structures (Genetic)

Clinical factors

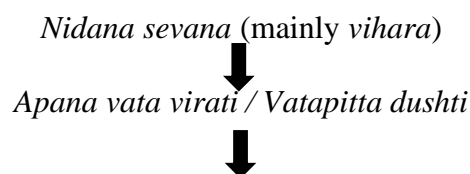
Predisposing factors

Acquired-

- ❖ Trauma of vaginal delivery causing injury muscle damage due to repeated childbirth,
- ❖ Prolonged 2nd stage of labor,
- ❖ Assisted operative delivery,
- ❖ Perineal tear,
- ❖ Precipitate labor, fundal pressure,
- ❖ Multiparae.
- ❖ Congenital- Inborn weakness of supporting structures

Aggravating factors

- ❖ Postmenopausal atrophy
- ❖ Poor collagen tissue repair with age
- ❖ Increased intra-abdominal pressure as in chronic lung disease and constipation
- ❖ Occupation (weightlifting)
- ❖ Obesity
- ❖ Increased weight of the uterus as in fibroid or myohyperplasia.



Garbhashayagata mansha dhatu get vitiated



'Kha' Vaigunyata in yoni deterioration in compactness and integrity of perineal muscles



Sithilata and sramsas of genital organs



Perineal laxity/Bhransha

- a. Difficulty in passing stool
- 7. Excessive white or blood-stained discharge per vaginum

Clinical features¹⁰

1. The feeling of something coming down per vaginum, especially while she is moving
2. Variable discomfort on walking
3. Backache or Dragging pain in pelvis
4. Dyspareunia
5. Urinary symptoms (in presence of cystocele)
 - a. Difficulty in passing urine
 - b. Incomplete evacuation
 - c. Urgency and frequency
 - d. Painful micturition
6. Bowel symptoms (in presence of rectocele)

Description of Drug

Lajjalu¹¹-

Hindi name- *chhuimui*

English name- Touch me or not plant

Synonyms- *Samipatra, Samanga, Jalkarika, Raktpadi, Namaskari, Karidrka,* According to *Bhavprakash Nighantu* and *kaiydeva Nighantu*, *lajjalu* is also known as *Yoniroga Vinashyete*.

Name	Latin Name	Family	Useful Part
Lajjalu	Mimosa Pudica Linn.	Fabaceae	Patra

S.No.	Dravya	Rasa	Guna	Virya	Vipaka	Karma
1.	Lajjalu	Tikta, Kashaya	Laghu, ruksha	sheeta	Katu	Kapha-pittajit Raktpitta Matsaram (bleeding disorders)

According to Vanaushadhi shatak¹²

Swarasa of patra and moola of Lajjalu are used in Garbhashaya Bhransha.

In acute uterine prolapse (yoni bhransha)

Details of Mimosa pudica-

Two well-known movements are observed in *M. pudica* L. (ojigi-so in Japanese): one is the very rapid movement of the leaves when it is stimulated by touch, heating, etc., and the other is the prolonged, periodic movement of the leaves called nyctinastic movement which is controlled by a biological clock¹³. The leaves of the sensitive plant *M. pudica* can adapt their closing response to electrical and mechanical stimulation so that they reopen to repeated

stimulation. The more intense the stimuli and the longer the intertribal interval, the longer it takes to adapt. Leaves adapted to the effects of mechanical stimulation can still respond by closing to electrical stimulation and vice versa¹⁴.

The bending movement of the pulvinus of *M. pudica* is caused by a rapid change in the volume of the ab-axial motor cell, in response to various environmental stimuli. The bending of the pulvinus is retarded by treatments with action-affecting reagents and calcium channel inhibitors. The actin filaments in the motor cells are fragmented in response to electrical stimulation. Hence, the study demonstrated that depolymerisation of the actin cytoskeleton in pulvinus motor

cells in response to electrical signals increases calcium levels¹⁵.

This way, *Mimosa pudica* works on perineal muscles through the actin filament, calcium mechanism, and electrical stimulation. Further research is needed to determine its mode of action on the cellular level of the human body.

Modern treatment

For Uterine prolapse stage 1&2, vaginal pessaries are used for stage 3&4, and surgery like anterior colporrhaphy, posterior colporrhaphy, vaginal hysterectomy, and laparoscopic hysterectomy are recommended. The prognosis of hysterectomy results in comorbidity conditions such as HTN, CVD, DM, osteoporosis, etc.

Mode of administration-

Kegels or pelvic floor exercises strengthen the pelvic floor muscles and prevent pelvic organ prolapse. To do Kegel exercises, Empty the bladder, Sit or lie down, Tighten the pelvic floor muscles to stop the flow of urine or try not to pass gas, Hold the squeeze for 3–5 seconds, Relax the muscles for 3–5 seconds, and Repeat 20 times, five times a day.

Kashaya (decoction)- Orally 10 days TDS

Yoni Lepana (Vaginal Painting)- Warm paste/*Kalka* of *Lajjalu* should be applied per vaginum and washed with lukewarm water after 45 minutes.

Yoni Pichu- *Pichu* is made up of 2-3 cotton swabs wrapped with gauze pieces and tied with a long thread, autoclaved and immersed in *lajjalu swarasa*, and placed in the vagina.

Place: *Yoni* (Vaginal canal)

Position of the patient during the procedure: lithotomy position.

Pichu Dharana Kala: *Aamutra Vega* (Urge to urinate)

Duration of therapy: 7 days after cessation of menses, for the next 15 days.

Method of procedure-

Purva Karma -

- Part preparation is done.
- The patient is asked to empty the bladder.
- Preparation of *swarms*-soaked *pichu*.

Pradhan Karma –

- Aseptic, sterile *pichu*-soaked *Swarasa* was inserted into the vagina. The thread of the *pichu* should come out of the vagina for easy removal.

Paschat Karma-

- After the procedure, the patient is asked to rest for 15 minutes.
- *Pichu* is removed when the patient Urge to urinate.

Method of Administration of Drug

Drug- *Lajjalu swarasa*

Duration - 30 mins for 7 days for three consecutive cycles

DISCUSSION

Lajjalu has tonic properties. *Sheeta Virya* of *Lajjalu* soothes the urinary tract mucosa and reduces burning, inflammation and pain by causing pitta shaman; it also has a *Balya* effect on the urinary bladder. Chemical analysis has shown that *Mimosa pudica* contains various compounds, including "alkaloids, flavonoid C-glycosides, sterols, terpenoids, tannins, saponin and fatty acids". The plant roots have been shown to contain up to 10% tannin¹⁶. **Flavonoid C-glycosides** showed significant antioxidant, anticancer, antitumor, hepatoprotective, and anti-inflammatory activity.¹⁷ **Terpenoids** are helpful in cancer and have antimicrobial, antifungal, antiparasitic, antiviral, anti-allergenic, antispasmodic, antihyperglycemic, anti-inflammatory, and immunomodulatory properties¹⁸. The *swarasa* of *Lajjalu*, taken orally, *lepana* & *pichu* form, has a highly antiseptic and antibacterial & *Sukshma Yogyahi* property, which helps to nourish & strengthen the uterine muscle. *Pichu* helps to hold the wall of the vagina upward and remains in the vagina for a long duration for better action of the drug.

CONCLUSION

Ayurveda explains many methodologies for treating gynaecological disorders. *Sthanika Chikitsa* has promising results in managing various gynaecological disorders. However, the plant extract has diverse pharmacological activities, and very few clinical studies have been available. So, it is necessary to conduct clinical trials according to the studies carried

out and exploit the full medicinal potential of a single drug, *Mimosa pudica*, and pelvic floor strength, which a perineometer can measure.

REFERENCES

1. DC Dutta's Textbook of Gynaecology JAYPEE Publishers 7th edition, Edited by Hiralal Konar chapter 15.
2. Hendrix SL, Clark A, Nygaard I, Aragaki A, Barnabei V, McTiernan A. Pelvic organ prolapse in the Women's Health Initiative: gravity and gravidity. *Am J Obstet Gynecol.* 2022 Jun;186(6):1160-6.
3. Ayurvediya Prasutitantra Evum Striroga, Part 2 Prasuti tantra by Dr. Premvati Tewari, Second edition, Chaukhamba Orientaliya, Varanasi, pg no. 308
4. Ayurvediya Prasutitantra Evum Striroga, Part 2 Prasuti tantra by Dr. Premvati Tewari, Second edition, Chaukhamba Orientaliya, Varanasi, pg no. 308
5. DC Dutta's Textbook of Gynaecology JAYPEE Publishers 7th edition, Edited by Hiralal Konar chapter 15 pg no. 165.
6. DC Dutta's Textbook of Gynaecology JAYPEE Publishers 7th edition, Edited by Hiralal Konar chapter 15 pg 168.
7. Susruta Samhita of susruta with the nibandha-sangraha Commentary of Sri Dalhan Acharya edited by Vaidya Jadavji Trikamji Acharya Chaukhamba Surbharti Prakashan Varanasi
8. Charaka samhita of Agnivesha , revised by charak & Drudhabala with hindi commentary by Pt. Kashinath Shastri & Dr. Gorakha Natha Chaturvedi, chikitsasthan 30
9. DC Dutta's Textbook of Gynaecology JAYPEE Publishers 7th edition, Edited by Hiralal Konar chapter 15 pg 167.
10. DC Dutta's Textbook of Gynaecology JAYPEE Publishers 7th edition, Edited by Hiralal Konar chapter 15.
11. Prof. P.V. Sharma's Dravyaguna Vigyan vol. 2 editions: reprint 2009, Chaukambhavishwabharti, Varanasi
12. Pt. Durga Prasad Sharma's Vanaushadhi Shatak, Shri Baidhnath ayurvedic bhawan ltd.
13. Ueda M, Yamamura S. The chemistry of leaf movement in *Mimosa pudica* L. *Tetrahedron.* 1999; 55:10937-48.
14. Applewhite PB. Behavioral plasticity in the sensitive plant, *Mimosa.* *Behav Biol.* 1972; 7:47-53
15. Yao H, Xu Q, Yuan M. Actin dynamics mediates the changes of calcium level during the pulvinus movement of *Mimosa pudica*. *Plant Signal Behav.* 2008; 3:954-60.
16. https://en.wikipedia.org/wiki/Mimosa_pudica#:~:text=Chemical%20analysis%20has%20shown%20that,found%20within%20the%20plant's%20leaves.
17. **Advance on the Flavonoid C-glycosides and Health Benefits** , Jianbo Xiao, 2016 Jul 29:56 Suppl1:S29-45. doi:10.1080/10408398.2015.1067595. <https://pubmed.ncbi.nlm.nih.gov/26462718/>
18. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3182282/#:~:text=Terpenoids%20have%20been%20found%20to,properties%5B45%2D48%5D>.

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