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"ASRIGDARA (ABNORMAL UTERINE BLEEDING): CLASSICAL CONCEPTS AND EVIDENCE FOR AYURVEDIC HAEMOSTATIC FORMULATIONS — A NARRATIVE REVIEW"

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ABSTRACT:

Background: Abnormal uterine bleeding, and heavy menstrual bleeding in particular, is common, under-reported and a major contributor to iron deficiency and anaemia in women of reproductive age. Ayurveda describes excessive or prolonged uterine bleeding under Asrigdara (also called Pradara) and has a long tradition of haemostatic formulations based on astringent and Pitta-pacifying drugs such as Ashoka, Lodhra and Dhataki. **Objective:** To review the classical Ayurvedic understanding of Asrigdara, relate it to the current FIGO framework for abnormal uterine bleeding, and summarise the clinical and experimental evidence for commonly used Ayurvedic haemostatic drugs and formulations. **Methods:** Classical texts (Charaka Samhita, Sushruta Samhita, Bhaishajya Ratnavali, Bhavaprakasha Nighantu) were reviewed for the description and management of Asrigdara. PubMed was searched for reviews, clinical trials, protocols, case reports and experimental studies on Ayurvedic interventions for heavy menstrual bleeding and on *Saraca asoca*, *Symplocos racemosa* and related drugs. Findings were synthesised narratively. **Results:** The classical account of Asrigdara as excessive menstrual flow caused by Pitta-aggravated Rakta carried by Vata corresponds broadly to the symptom of heavy menstrual bleeding, but not to a single diagnosis; the FIGO PALM-COEIN system is therefore required alongside Ayurvedic assessment. Experimental studies of *Saraca asoca* and Ashokarishta show anti-inflammatory and endometrial anti-proliferative effects, although findings on oestrogenic activity conflict. The only recent clinical study of an Ashoka-based formulation is open-label and uncontrolled, and a randomised trial of Ashokarishta against tranexamic acid has not yet reported. No controlled clinical evidence was found for Pushyanuga churna. Widespread adulteration of Ashoka bark is a major quality concern. **Conclusion:** Ayurvedic haemostatic formulations are biologically plausible and widely used for Asrigdara, but controlled clinical evidence is very limited. Structural and coagulation causes must be excluded first, and authenticated, standardised products should be tested in randomised trials using validated blood-loss measures.

KEYWORDS: Asrigdara, Pradara, heavy menstrual bleeding, Ashokarishta, Saraca asoca, Symplocos racemosa

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INTRODUCTION

Abnormal uterine bleeding (AUB) is an umbrella term for bleeding from the uterine corpus that is abnormal in frequency, regularity, duration or volume. It is estimated to affect more than half of reproductive-aged women and girls at some time, and heavy menstrual bleeding (HMB) is the component that contributes most to iron deficiency and anaemia[1]. Despite this burden, AUB and HMB remain under-recognised and under-reported, partly because women often regard heavy periods as normal[1]. In India the problem is magnified by the high background prevalence of anaemia, and menorrhagia has been reported to account for a substantial share of gynaecological admissions[2].

The International Federation of Gynecology and Obstetrics (FIGO) has standardised the approach to AUB through two systems. FIGO System 1 describes the bleeding pattern in terms of frequency, duration, regularity and flow volume, while System 2 classifies causes using the acronym PALM-COEIN: polyp, adenomyosis, leiomyoma and malignancy as structural causes, and coagulopathy, ovulatory dysfunction, endometrial, iatrogenic and not otherwise classified as non-structural causes[1]. Medical management of HMB includes non-steroidal anti-inflammatory drugs, tranexamic acid, combined hormonal contraceptives, progestogens and the levonorgestrel intrauterine system, with surgical and image-guided options for structural disease[3,4]. These treatments help many women, but in one cohort of women with von Willebrand disease control often required combination therapy, and concerns about fertility, weight gain and hair loss led some to discontinue hormonal treatment[4].

Ayurveda describes excessive or prolonged uterine bleeding under the name Asrigdara, literally "bursting forth of blood", also known as Pradara because of the excessive discharge[5,6]. Classical and later texts recommend a range of astringent, cooling and haemostatic drugs and formulations, among which Ashoka (*Saraca asoca*), Lodhra (*Symplocos racemosa*), Pushyanuga churna and Ashokarishta remain among the most widely prescribed in India[5,7,8]. The aim of this review is to present the classical concept of Asrigdara for an integrative readership, to relate it to the FIGO framework, and to evaluate critically what the published evidence shows for these formulations.

METHODOLOGY

This narrative review was prepared in two parts. First, the primary classical texts of Ayurveda, namely Charaka Samhita (Chikitsa sthana, chapter 30), Sushruta Samhita (Sharira sthana, chapter 2), Bhaishajya Ratnavali (chapter on women's diseases) and Bhavaprakasha Nighantu, were studied for descriptions of Asrigdara, its causes, pathogenesis and treatment, and for the properties of the principal haemostatic drugs[5–8]. Second, PubMed was searched for literature published up to October 2026 using combinations of the terms Asrigdara, Raktapradara, Pradara, menorrhagia, heavy menstrual bleeding, abnormal uterine bleeding, Ayurveda, Ayurvedic, *Saraca asoca*, Ashoka, Ashokarishta, *Symplocos racemosa*, Lodhra and Pushyanuga. Reviews, randomised controlled trials, trial protocols, open-label clinical studies, case reports and experimental studies were considered. Every reference cited in this article was checked against its PubMed record for authors, title, journal, year, volume, pages and digital object identifier. Retracted publications identified during the search were excluded. The findings are synthesised narratively rather than statistically.

CLASSICAL AYURVEDIC UNDERSTANDING OF ASRIGDARA

1. Normal Artava and the definition of Asrigdara

Ayurveda describes normal menstrual blood (Shuddha artava) as appearing at monthly intervals, lasting about five days, being neither excessive nor scanty, free from pain and burning, and having the colour of rabbit's blood or lac dye; such blood does not stain cloth after washing[6]. Asrigdara is defined in contrast to this norm as menstrual bleeding that is excessive in amount, prolonged in duration, or occurring between periods[5,6]. The classical definition is therefore symptom-based and, like the modern term HMB, describes a pattern of bleeding rather than a single disease. The same presentation can therefore arise from very different causes.

2. Nidana (causes)

Charaka lists among the causes excessive intake of salty, sour, heavy, pungent, hot and unctuous food, meat of domestic and aquatic animals, curds, fermented preparations and alcohol, together with overeating and indigestion, excessive physical strain, emotional stress, trauma and repeated pregnancies or

abortions[5]. Most of these factors are regarded as aggravating Pitta and Rakta, or as weakening tissues; they are dietary and lifestyle factors rather than specific diagnoses[5].

3. Samprapti (pathogenesis) and types

In Charaka's account, Vata, aggravated by these causes, takes up blood (Rakta) that has itself increased in quantity and become vitiated by Pitta, and carries it into the uterine vessels (Rajovaha sira). The volume of menstrual blood is thereby increased, and because the bleeding is excessive it is called Pradara or Asrigdara[5]. Four types are described according to the predominant Dosha. In the Vataja type the blood is frothy, thin, rough and dark, with pain; in the Pittaja type it is yellowish, bluish or dark, hot, and accompanied by burning, thirst and fever; in the Kaphaja type it is slimy, pale and heavy; and in the Sannipataja type features of all three are mixed and the condition is regarded as difficult to cure[5].

Sushruta emphasises the consequences of prolonged bleeding, describing weakness, giddiness, fainting, thirst, burning sensation, pallor and drowsiness, and advises that a woman with such complications should receive treatment directed at both the bleeding and its effects[6]. These features correspond closely to the symptoms of iron-deficiency anaemia and hypovolaemia, and they underline that Asrigdara was recognised classically as a condition with systemic consequences rather than a purely local problem.

4. Correlation with the FIGO framework

The classical types of Asrigdara can be read as clinical phenotypes of the bleeding pattern, roughly comparable to FIGO System 1, rather than as diagnoses of cause. The Dosha-based description of colour, consistency, pain and associated features is clinically useful for selecting Ayurvedic treatment, but it does not distinguish a submucous fibroid from an endometrial polyp, adenomyosis, ovulatory dysfunction, a bleeding disorder or endometrial hyperplasia[1]. This limitation matters in practice. Leiomyomas and adenomyosis are recognised structural causes of HMB[1], and leiomyoma-associated bleeding has its own medical, image-guided and surgical options[3]. Inherited bleeding disorders can cause HMB, and a systematic review recommended the levonorgestrel intrauterine system as first-line therapy in these women, followed by tranexamic acid and desmopressin[9]. Acquired coagulopathy can also present as heavy menstruation; a case report in this journal described an adolescent with irregular cycles whose apparent menorrhagia proved to be a manifestation of dengue haemorrhagic fever with thrombocytopenia[10]. Ayurvedic assessment of Asrigdara should therefore be integrated with FIGO System 2 investigation, including haemoglobin and, where indicated, ultrasound, coagulation studies and endometrial sampling, before haemostatic treatment is started.

PRINCIPLES OF AYURVEDIC MANAGEMENT

Charaka advises that Asrigdara be treated along the lines of bleeding diarrhoea (Raktatisara), bleeding disorders (Raktapitta) and bleeding piles (Raktarsha), with drugs that are astringent (Kashaya), cooling (Shita) and Pitta-pacifying, and that the treatment be adapted to the Dosha involved[5]. In practice this gives three broad aims: to stop or reduce the bleeding (Raktasthambhana) with astringent and haemostatic drugs; to correct the underlying Dosha imbalance, particularly Pitta and Rakta; and to restore strength and blood (Brimhana and Raktavardhana) after blood loss. Within this framework, Charaka himself describes Pushyanuga churna, a compound powder of astringent and Pitta-pacifying drugs, as a remedy for all forms of Pradara[5], while later formularies such as Bhaishajya Ratnavali describe Ashokarishta, a self-fermented preparation of Ashoka bark, as a principal remedy for Asrigdara and related gynaecological complaints[7]. Single drugs such as Lodhra, Ashoka, Dhataki, Utpala and Udumbara are described in the Nighantu literature as astringent and haemostatic[8].

EVIDENCE FOR SINGLE HAEMOSTATIC DRUGS

1. Ashoka (Saraca asoca)

Ashoka is the drug most closely associated with women's health in Ayurveda, and its bark is the main ingredient of Ashokarishta and related preparations[7,11]. A comprehensive 2023 review in the Journal of Ethnopharmacology traced its use in gynaecological disorders from classical texts through later pharmacopoeias and summarised its phytochemistry and pharmacology, but concluded that more systematic phytochemical, pharmacological and clinical evaluation, and better safety and toxicology data for traditional formulations, are still needed[11].

Experimental data offer some mechanistic support. In immature rats given oestradiol to induce endometrial

thickening and keratinising metaplasia, a methanolic extract of Ashoka bark reduced the number of stratified epithelial layers, lowered serum oestrogen and reduced uterine cyclo-oxygenase-2 expression, and it also reduced experimental paw oedema in mice; the authors proposed anti-oestrogenic and anti-inflammatory actions on the endometrium[12]. In the same model, Ashokarishta prepared with genuine Ashoka bark reduced oestradiol-induced endometrial thickening and serum oestrogen, with no signs of toxicity[13]. These findings are relevant because oestrogen-driven endometrial instability is one proposed mechanism of dysfunctional uterine bleeding[12].

The experimental evidence is not uniform, however. A standardised ethanolic extract of Ashoka flowers, containing quercetin, kaempferol, beta-sitosterol and luteolin, showed oestrogenic activity in ovariectomised rats[14], whereas in an immature-rat uterotrophic assay neither Ashoka bark, Lodhra bark nor a marketed Ashokarishta showed oestrogenic activity[15]. Differences in plant part, extract and model probably explain these discrepancies, but they mean that the hormonal actions of Ashoka should not be assumed, and that results from flowers cannot be transferred to bark preparations.

2. Lodhra (Symplocos racemosa)

Lodhra is described in Ayurveda as astringent, cooling and Kapha-Pitta-pacifying, and is used both internally and as a local application in uterine disorders and leucorrhoea[8,16]. A comprehensive review found that most pharmacological reports concern the stem bark and include anti-inflammatory, antioxidant, antiandrogenic, wound-healing and hepatoprotective activities, attributed to phenolic glycosides such as symplocoside, triterpenoids and flavonoids; the authors noted, however, that clinical validation of the traditional claims had not been carried out and that biomarker-based studies were needed[16]. As noted above, Lodhra bark did not show oestrogenic activity in an immature-rat model, although a combination of Ashoka and Lodhra produced a slight increase in the height of the uterine luminal epithelium of uncertain significance[15]. No controlled clinical trial of Lodhra alone in HMB was identified.

3. Dhataki and other astringent drugs

Dhataki (*Woodfordia fruticosa*) flowers are an ingredient of Pushyanuga churna and also act as the natural fermentation starter in Ashokarishta and other Arishta preparations. Dhataki is traditionally used in leucorrhoea and menorrhagia, and experimental work has shown immunostimulatory effects of its flower extract on macrophages and bone marrow cells in mice[17]. Dhataki and other astringent drugs such as Utpala therefore remain largely untested as individual haemostatic agents in women with HMB.

EVIDENCE FOR COMPOUND FORMULATIONS

1. Ashokarishta and Ashoka-based formulations

Ashokarishta is the formulation most frequently prescribed for Asrigdara. Its classical composition combines Ashoka bark with Dhataki flowers, jaggery and a group of carminative, astringent and Pitta-pacifying drugs including Musta, Shunthi, Daruharidra, Utpala, the three myrobalans (Triphala), mango seed, cumin, Vasa and sandalwood[7]. Despite its long use, the authors of a recent trial protocol noted that no clinical trial of Ashokarishta had been completed[2].

That protocol describes an open-label randomised controlled trial being conducted by the Central Council for Research in Ayurvedic Sciences in New Delhi. A total of 140 women with menorrhagia are randomised either to Ashokarishta 20 mL with Trinakantamani pishti 250 mg and an iron–folic acid tablet twice daily for three months, or to tranexamic acid 500 mg three times daily for seven days from the first day of menses for three cycles plus iron–folic acid. The primary outcomes are change in Pictorial Blood Loss Assessment Chart (PBAC) score and duration of bleeding, with the Menorrhagia Impact Questionnaire as a secondary outcome. Seventy-nine participants had been enrolled by December 2024, with analysis expected by February 2026[2]. The results had not been published in PubMed at the time of writing. Its findings will be important, although the open-label design calls for caution with subjective outcomes.

The largest published clinical study of an Ashoka-based product is an open-label study of a proprietary syrup in 228 non-pregnant women aged 18 to 45 years with HMB. After 15 mL twice daily for 90 days, estimated menstrual blood loss fell by 54% and PBAC scores by 58% from baseline, with improvements in bleeding duration, clot passage and quality of life, a modest rise in haemoglobin, stable endometrial thickness and no clinically significant adverse events[18]. These results are encouraging, but the study had no

control group, was conducted with industry involvement and did not report the underlying causes of HMB, so regression to the mean, natural fluctuation and placebo effects cannot be excluded[18].

2. Pushyanuga churna

Pushyanuga churna, described by Charaka for all types of Pradara, is a compound powder of more than twenty drugs, including Patha, Jambu and mango seed kernels, Lodhra, Mocharasa, Dhataki, Musta, Bilva, Katphala, Madhuka, Arjuna, Raktachandana and red ochre (Gairika), traditionally taken with honey and rice-washed water (Tandulodaka)[5]. Its composition is dominated by astringent, tannin-rich and Pitta-pacifying drugs, which gives it a plausible haemostatic and anti-inflammatory rationale. However, the PubMed searches for this review identified no randomised or controlled clinical trial of Pushyanuga churna in HMB. Its evidence base therefore rests on classical authority and clinical experience, and it is a clear priority for formal evaluation.

3. Other approaches and structural causes

Ayurvedic practitioners also treat structural causes of AUB. A case series in AYU reported ultrasonographic disappearance of uterine fibroids in seven women after seven weeks of Kanchanara guggulu, Shigru guggulu and Haridra khanda[19]. A case report in this journal described a woman in her mid-forties with AUB, two small fundal fibroids and a cervical polyp, who had been advised hysterectomy, and whose symptoms and imaging abnormalities resolved after three months of oral Ayurvedic medicines with monthly Uttara basti[20]. A small comparative pilot study in 22 women with fibroids reported symptom relief and reduction in fibroid size in some patients receiving Ayurvedic medicines with medicated intrauterine enema, compared with no relief in a control group using sesame oil[21]. Case reports and very small pilot studies cannot establish efficacy, and fibroid size can vary with the menstrual cycle and with imaging technique, but these reports indicate areas worth testing in controlled studies.

QUALITY, SAFETY AND SUSTAINABILITY

The value of any trial of Ashoka-based products depends on the authenticity of the raw material. A study of market samples of "Ashoka" bark from 25 shops, mostly in peninsular India, used DNA barcoding validated by nuclear magnetic resonance spectroscopy and found that more than 80% of samples were spurious, representing material from at least seven different plant families[22]. The species is classified as vulnerable by the International Union for Conservation of Nature, and scarcity drives both adulteration and the use of substitutes[11,22]. One experimental study found that Ashokarishta prepared with a commonly used substitute bark reduced oestradiol-induced endometrial thickening to an extent similar to that seen with genuine Ashoka[13], but such pharmacological similarity in rats cannot be assumed to translate into equivalent clinical effect. Authentication by macroscopy, chromatography or DNA methods, and sustainable cultivation, are therefore prerequisites for credible research and safe practice.

Safety data for Ashokarishta and Pushyanuga churna in humans are limited to clinical experience and the absence of serious adverse events in the open-label syrup study[18]. Fermented preparations contain self-generated alcohol, which should be considered in some patients, and herbomineral additions such as Trinakantamani pishti or Gairika require appropriate quality control[2,5]. Above all, the main safety risk in treating Asrigdara with any haemostatic agent is delay in diagnosing an underlying structural lesion, coagulopathy or malignancy[1,9,10].

DISCUSSION

The classical Ayurvedic description of Asrigdara is clinically perceptive. It recognises excessive, prolonged and intermenstrual bleeding as a distinct problem, describes its systemic consequences in terms that match anaemia, and distinguishes phenotypes according to the character of the blood and associated symptoms[5,6]. Its pathogenic model, in which Pitta-vitiated Rakta increases in quantity and is driven into the uterine vessels by Vata, offers a framework for treatment selection. However, like the modern symptom term HMB, Asrigdara is a description of a bleeding pattern rather than a diagnosis. The FIGO PALM-COEIN system fills this gap by directing investigation towards specific causes[1], and the two approaches are complementary rather than competing.

The evidence for Ayurvedic haemostatic formulations is at an early stage. Experimental studies suggest that Ashoka bark and Ashokarishta can reduce oestrogen-driven endometrial proliferation and inflammation[12,13], which offers a plausible mechanism for at

least some forms of HMB, particularly those associated with endometrial or ovulatory dysfunction. Yet the hormonal pharmacology of Ashoka remains uncertain, since different extracts and models have produced conflicting results[14,15]. Clinical evidence consists of one large open-label uncontrolled study of an Ashoka-based syrup[18] and one ongoing randomised trial of Ashokarishta against tranexamic acid[2]. For Lodhra and Pushyanuga churna, no controlled clinical data were identified, and the evidence remains classical and experimental[5,16].

Several priorities follow. First, trials should define HMB objectively, ideally with the PBAC or alkaline haematin method, and classify participants using FIGO System 2, so that responses can be interpreted by cause; Dosha phenotyping can be recorded in parallel. Second, test products must be authenticated and standardised, given the extent of Ashoka adulteration[22]. Third, placebo-controlled or double-dummy designs against tranexamic acid are feasible for oral formulations and would greatly strengthen the evidence. Fourth, outcomes should include haemoglobin and ferritin, quality of life and adverse events, with follow-up over several cycles. Finally, the publication of the ongoing Ashokarishta trial[2] should be awaited and its results assessed critically.

From a clinical perspective, Ayurvedic haemostatic formulations may reasonably be considered for women with HMB in whom structural, malignant and coagulation causes have been excluded, especially those who are unwilling or unable to use hormonal treatment. They should be combined with correction of iron deficiency, and women with heavy bleeding unresponsive to treatment, bleeding after the menopause, or risk factors for endometrial hyperplasia require prompt gynaecological evaluation[1,3].

CONCLUSION

Asrigdara, the Ayurvedic counterpart of heavy and abnormal menstrual bleeding, is described in the classical texts with a coherent pathogenesis centred on Pitta, Rakta and Vata and a therapeutic strategy based on astringent, cooling and haemostatic drugs. Ashoka, Lodhra, Pushyanuga churna and Ashokarishta are biologically plausible and widely used, and experimental studies provide some mechanistic support, but controlled clinical evidence is very limited. Integration of Ayurvedic assessment with FIGO-based investigation, authentication of raw materials, and well-designed randomised trials are needed before these formulations can be recommended with confidence in integrative gynaecological care.

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