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Review Article

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"VANDHYATVA (FEMALE INFERTILITY): CLASSICAL AETIOLOGY, CLASSIFICATION AND MANAGEMENT STRATEGIES — A NARRATIVE REVIEW"

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ABSTRACT:
Background: Infertility affects up to one in seven couples and carries a heavy psychosocial burden, particularly in societies where childbearing is closely tied to social identity. Conventional evaluation focuses on ovulatory, tubal, uterine and male factors, and treatment ranges from ovulation induction to in vitro fertilisation, which remains costly and inaccessible for many couples. Ayurveda discusses female infertility under the term Vandhyatva and offers a structured account of the factors necessary for conception. **Objective:** To review the classical Ayurvedic understanding of Vandhyatva, its causes and classification, to correlate these with current biomedical categories of female infertility, and to summarise the published clinical evidence for Ayurvedic management strategies. **Methods:** Charaka Samhita, Sushruta Samhita, Ashtanga Hridaya and Kashyapa Samhita were reviewed for concepts of conception and infertility. PubMed was searched up to October 2026 for reviews, guidelines, clinical trials, protocols and case reports on female infertility, Ayurveda, polycystic ovary syndrome, tubal blockage and Uttara basti. Each cited record was verified against PubMed and findings were synthesised narratively. **Results:** The classical requirement of four factors for conception, namely Ritu (fertile period), Kshetra (reproductive tract), Ambu (nourishment) and Beeja (ovum and sperm), provides a framework that maps closely onto ovulatory, uterine, tubal and male causes of infertility. Published evidence for Ayurvedic management consists mainly of small single-arm or open-label studies and case reports, covering anovulation and polycystic ovary syndrome, thin endometrium and tubal blockage, together with one registered randomised trial protocol comparing an Ayurvedic regimen with letrozole. Reported ovulation, tubal patency and conception rates are encouraging but are drawn from uncontrolled or small samples. **Conclusion:** The Ayurvedic model of Vandhyatva is coherent and clinically usable alongside modern infertility evaluation. Rigorous randomised trials with live birth as the primary outcome are needed before Ayurvedic regimens can be recommended as alternatives to established fertility treatments.

KEYWORDS: Vandhyatva, female infertility, Garbhasambhava samagri, Artavavaha srotas, Uttara basti, polycystic ovary syndrome

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INTRODUCTION

Infertility is commonly defined as the failure to achieve pregnancy after 12 months of regular unprotected intercourse in women younger than 35 years, or after 6 months in women aged 35 years and older, and it affects up to 15% of couples[1]. It is classified as primary when no previous pregnancy has occurred and secondary when the couple has previously conceived, although the terms infertility and subfertility are often used loosely[2]. Its effects extend well beyond reproduction, and the emotional distress associated with involuntary childlessness is widely recognised[2].

Current guidance recommends a systematic and stepwise evaluation that begins with the least invasive tests for the most common causes. For the female partner, the work-up concentrates on ovulatory function, ovarian reserve and structural abnormalities of the uterus and fallopian tubes, while a male factor contributes to infertility in 40–50% of couples and unexplained infertility accounts for up to 30%[1,3]. Treatment ranges from counselling and expectant management to ovulation induction, intrauterine insemination and in vitro fertilisation with or without intracytoplasmic sperm injection[2]. Polycystic ovary syndrome (PCOS), the most frequent cause of anovulatory infertility, is now managed according to an international evidence-based guideline that emphasises lifestyle, emotional wellbeing and cheaper and safer fertility management[4].

Despite these advances, assisted reproduction remains expensive, emotionally demanding and unevenly available, and many couples in India and elsewhere consult traditional practitioners either before or alongside conventional care. Ayurveda has a detailed vocabulary for infertility. The female condition is termed Vandhyatva, and the classical texts set out the factors necessary for conception, the disorders that impair them and the measures intended to restore fertility[5–8]. Ayurvedic gynaecology departments in India now publish clinical studies on Vandhyatva with increasing frequency[9,10].

The aim of this review is to present the classical concepts of Vandhyatva in a form accessible to an integrative readership, to relate them to current biomedical categories of female infertility, and to summarise critically what the published evidence shows for Ayurvedic management strategies.

METHODOLOGY

This narrative review was prepared in two parts. First, the primary classical texts of Ayurveda, namely Charaka Samhita (Sharira sthana and Chikitsa sthana, chapter 30), Sushruta Samhita (Sharira sthana, chapter 2 and Uttara tantra, chapter 38), Ashtanga Hridaya (Sharira sthana, chapter 1 and Uttara sthana, chapters 33 and 34) and Kashyapa Samhita, were studied with their standard commentaries for concepts of conception, the causes and types of infertility, and its treatment[5–8]. Second, PubMed was searched for literature published up to October 2026 using combinations of the terms Ayurveda, Ayurvedic, female infertility, Vandhyatva, anovulation, polycystic ovary syndrome, tubal blockage, thin endometrium, Uttarabasti and Uttara basti. Guidelines, reviews, randomised and non-randomised clinical studies, trial protocols and case reports 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 CONCEPTION AND INFERTILITY

1. Garbhasambhava samagri: the four essentials of conception

Sushruta states that conception requires the conjunction of four factors, which are compared with the requirements for the growth of a seed: Ritu, the appropriate fertile period; Kshetra, the field, that is, a healthy reproductive tract and uterus; Ambu, the nourishing fluid derived from the essence of digested food; and Beeja, the healthy ovum and sperm[6]. When all four are present and normal, conception follows; a defect in any of them may result in infertility. Charaka adds that the formation of the embryo depends on maternal, paternal, spiritual, nutritional and psychological factors, and that sexual conduct, timing of intercourse and the emotional state of both partners also influence conception[5].

This framework has a striking structural parallel with modern infertility evaluation. Ritu corresponds to the menstrual cycle and the fertile window around ovulation; Kshetra to the uterus, cervix and fallopian tubes; Ambu to the hormonal and nutritional milieu that sustains folliculogenesis, endometrial development and

implantation; and Beeja to oocyte and sperm quality[1,9]. The recent emphasis on endometrial receptivity as a determinant of implantation fits particularly well with the classical description of Kshetra[9].

2. Nidana (causes) of Vandhyatva

The classical texts describe several groups of causes. Defects of Beeja in either partner, including defects inherited from the parents, are said to cause infertility or abnormal offspring[5]. Disorders of the reproductive tract, described among the twenty Yonivyapad, impair Kshetra; Charaka notes that a woman affected by these disorders does not conceive, and Sushruta lists Vandhya, characterised by loss of menstruation, among the Yonivyapad themselves[5,6]. Disorders of menstruation (Artava dushti) and loss or scantiness of menstrual blood (Nashtartava and Artava kshaya) reflect impaired Ritu and Ambu. Psychological factors, including grief, fear and anxiety, and improper diet and conduct that vitiate the Doshas, especially Vata, are repeatedly emphasised[5,7]. Vata, which governs the movement of the ovum, sperm and embryo through the reproductive channels, is regarded as the principal Dosha in the pathogenesis of most gynaecological disorders[5].

3. Classification of Vandhyatva

The major texts do not give a single uniform classification, and later compendia added their own schemes. A simple clinical division, widely used in teaching, distinguishes women who have never conceived (corresponding to primary infertility) from those who have conceived once and then failed to conceive again (corresponding to secondary infertility). Further categories describe women whose pregnancies end repeatedly in miscarriage or whose children do not survive, which overlap with the modern concept of recurrent pregnancy loss. In clinical practice, Ayurvedic gynaecologists diagnose Vandhyatva according to the underlying Yonivyapad or menstrual disorder, the deficient element of Garbhasambhava samagri and the predominant Dosha, so that diagnosis directly guides treatment, as published case reports and trials illustrate[9–11].

4. Correlation with modern categories

Applying these principles, anovulatory infertility, including that associated with PCOS, can be understood as a disorder of Beeja and Ritu, often presenting clinically as Artava kshaya or Nashtartava with Kapha and Medas (adipose tissue) involvement[11,12]. Tubal factor infertility has no direct classical equivalent, because the fallopian tubes are not described as separate organs; Ayurvedic authors therefore correlate the tubes with the Artavavaha srotas and interpret tubal blockage as Sanga (obstruction) of this channel, analysed according to the involvement of all three Doshas[13]. Thin or poorly receptive endometrium is interpreted as a defect of Kshetra and Ambu[9]. Endometriosis-associated infertility has been described in terms of Vatiki yonivyapad with features of Paripluta[10]. Diminished ovarian reserve, assessed by anti-Müllerian hormone, has been related to Beeja kshaya[14]. These correlations are interpretive rather than exact, but they allow modern investigations to inform Ayurvedic diagnosis and help define outcomes that can be measured.

PRINCIPLES OF AYURVEDIC MANAGEMENT

The classical management of Vandhyatva rests on four principles. The first is to identify and treat the underlying disorder of the reproductive tract, menstruation or Dosha balance, since correction of the cause is regarded as the essential precondition for conception[5]. The second is purification (Shodhana) of the body, through therapeutic emesis (Vamana), purgation (Virechana) and enemas (Basti), followed by local purification of the reproductive tract with Uttara basti, vaginal pessaries (Yoni varti), tampons (Yoni pichu) and douches (Yoni prakshalana)[5–7]. The third is the administration of drugs that promote conception and sustain pregnancy, described as Garbhaprada, Prajasthapana and Vrishya, often in the form of medicated ghee such as Phala ghrita, which is indicated for women who desire progeny[7]. Shatapushpa (*Anethum sowa*) and Shatavari (*Asparagus racemosus*) are given particular prominence in Kashyapa Samhita for menstrual and reproductive health[8]. The fourth is attention to diet, conduct, timing of intercourse and the emotional state of both partners, including treatment of the male partner where required[5].

In current practice, these principles are translated into individualised regimens that combine Shodhana procedures, Uttara basti and oral formulations, selected according to the deficient factor of conception and the dominant Dosha[9–12]. The evidence for each main clinical category is summarised below.

EVIDENCE FOR AYURVEDIC MANAGEMENT BY CLINICAL CATEGORY

1. Anovulation and polycystic ovary syndrome

PCOS is the most extensively studied indication. A scoping review conducted according to Joanna Briggs Institute methods identified 57 Ayurvedic studies in women with PCOS, of which 32 were case studies, 13 randomised controlled trials and 9 pre-post trials, most conducted in India[15]. Compound formulations and complex interventions combining several therapies with lifestyle modification predominated, Shatapushpa was among the most frequently used single herbs, and Basti was the most commonly used procedure. Reproductive outcomes, including menstruation, PCOS-related infertility and ovarian morphology, were the most studied, whereas metabolic and psychological outcomes and adverse event reporting were neglected[15].

Individual studies illustrate the range of approaches. In an open study of 15 women with PCOS, therapeutic emesis followed by Shatapushpadi ghanavati for 45 days was associated with statistically significant improvement in menstrual irregularity, body mass index, the number of non-dominant follicles, fasting blood glucose and hirsutism[12]. In an open-label randomised study of 30 women with anovulatory infertility confirmed by transvaginal sonography, Brihatyadi Yapana basti given for 15 days after menstruation for two cycles was followed by ovulation in 80% and conception in 26.7% of participants, compared with ovulation in 64.3% and no conceptions in the group receiving oral Shivalingi (*Bryonia laciniosa*) seed powder[16]. A case report in this journal described a woman with PCOS and 11 years of primary infertility, diagnosed as Vandhyatva due to Nashtartava, who lost 20 kg, regained regular menstruation and conceived within eight months of combined Shodhana and Shamana therapy after earlier intrauterine insemination and hormonal treatment had failed[11].

Importantly, a randomised controlled trial protocol from the Central Council for Research in Ayurvedic Sciences proposes to randomise 160 women aged 21–40 years with anovulatory or unexplained infertility to internal oleation with Phala ghrita followed by mild purgation with Gandharvahasta oil, or to letrozole, with a yoga programme in both arms for six months. Ovulation rate on serial transvaginal sonography is the primary outcome and conception rate a secondary outcome[17]. This is the first comparison of an Ayurvedic regimen against a standard ovulation-inducing drug, and its results will be of considerable importance.

Lifestyle components are also supported. In a controlled before-and-after study of 52 infertile women with PCOS, a 12-week structured yoga programme improved weight, post-glucose insulin, anti-Müllerian hormone, lipid levels, ovarian stromal thickness, follicle number and infertility-related quality of life, and 13 women in the yoga group compared with 7 controls became pregnant within one year[18]. These findings are consistent with the guideline emphasis on lifestyle in PCOS[4], although the study was not randomised.

2. Uterine and endometrial factors

Thin endometrium is an increasingly recognised cause of implantation failure. In a single-arm pilot trial of 15 women with an endometrial thickness below 7 mm, a medicated vaginal tampon (Yoni pichu) for six days after menstruation combined with oral Jeevaniya churna for 30 days was associated with highly significant improvement in endometrial thickness, layering, myometrial echogenicity, uterine artery Doppler flow and endometrial blood flow on Appelbaum's uterine scoring system, as well as in menstrual parameters and ovulation; one participant conceived[9]. The small sample, absence of a control group and short follow-up mean that these findings require confirmation.

Endometriosis-associated infertility has been addressed in a case report of a woman with ten years of primary infertility and repeated failed intrauterine insemination, intracytoplasmic sperm injection and in vitro fertilisation cycles. After five months of internal medicines, Virechana, Basti and Uttara basti, aimed at pacifying Vata, scraping (Lekhana), clearing the channels and supporting implantation, she conceived and delivered a healthy term infant[10].

3. Tubal factor

Tubal blockage is a major cause of female infertility for which the conventional options are tubal surgery or in vitro fertilisation. Ayurvedic studies have focused on intrauterine Uttara basti with oils having Vata-Kapha-pacifying and scraping properties. In a study of 16 women with unilateral or bilateral tubal blockage on hysterosalpingography, Kumari taila Uttara basti (5 mL for six days after menstruation over

two cycles) was followed by tubal patency in 80% of the 15 completers and conception in 40% within a two-month follow-up, with no apparent complications[19]. In a similar study of 19 women, Yavakshara taila Uttara basti produced patency in 68.8% but conception in only 6.3%[20]. Neither study had a control group. Moreover, a 2026 Cochrane review found that hysterosalpingography, the test used in both studies, had a pooled sensitivity of only 0.77 and specificity of 0.94 for bilateral tubal occlusion against laparoscopy with dye, with very low to moderate certainty[21], so part of the apparent benefit may reflect diagnostic misclassification or the flushing effect of the procedure itself. The theoretical basis for these interventions is discussed in Ayurvedic terms as relief of Sanga in the Artavavaha srotas[13].

4. Diminished ovarian reserve

Evidence in this area is limited to a single case report in which an Ayurvedic regimen given over three months, with a procedure lasting 21 days, was associated with a rise in anti-Müllerian hormone sufficient to allow the patient to undergo assisted reproduction with her own oocytes[14]. Biological variation in anti-Müllerian hormone measurements makes a single case difficult to interpret.

5. Real-world data

Routine clinical records offer another source of evidence. A retrospective analysis of electronic medical records from an integrative Ayurveda centre in Bengaluru reported that 58% of 65 women treated for infertility conceived within an average of six months, along with improvement in follicular parameters[22]. In the absence of a comparison group and of data on the duration and cause of infertility, these figures cannot be compared directly with expected spontaneous conception rates, but they illustrate how structured real-world data could support hypothesis generation.

DISCUSSION

This review shows that the classical Ayurvedic account of Vandhyatva provides an internally consistent framework that can be aligned with contemporary infertility evaluation. The four factors of conception correspond closely to the ovulatory, uterine and tubal, endocrine-nutritional and gamete components assessed in modern practice[1,6], and the classical insistence on examining and treating both partners anticipates current recommendations to evaluate the male partner from the outset[1].

The clinical evidence, however, remains preliminary. Almost all published studies are small, single-centre and uncontrolled, and many are case reports[9–16,19,20]. Ovulation and tubal patency are reported more often than conception, and live birth, the outcome that matters most to couples and the primary end point recommended for fertility research, is rarely reported. Spontaneous conception occurs in a proportion of couples with prolonged infertility, so uncontrolled conception rates are difficult to interpret. Reporting of adverse events is also inconsistent, as the scoping review of PCOS studies highlighted[15]. Intrauterine procedures in particular require careful aseptic technique and exclusion of pelvic infection, and these safeguards should be documented in every study.

Several priorities follow. First, randomised trials should compare standardised Ayurvedic regimens with current first-line treatments, as the ongoing Phala ghrita versus letrozole trial does[17], and should report clinical pregnancy and live birth. Second, participants should be characterised with standard modern investigations, including ovulation tracking, tubal assessment by an appropriate method, ovarian reserve and semen analysis, so that results can be interpreted by cause of infertility[1,3]. Third, the Ayurvedic diagnostic categories used for selection and individualisation should be clearly defined and, where possible, tested for reliability. Fourth, pragmatic designs and analyses of structured real-world data[22] may help evaluate individualised multi-component regimens that are difficult to standardise.

From a clinical perspective, Ayurvedic management can reasonably be offered as an adjunct to, or before, assisted reproduction in selected couples, provided that a full modern evaluation has been completed and that time-sensitive situations, particularly advanced maternal age and diminished ovarian reserve, are not allowed to delay effective treatment[1,2]. Lifestyle and mind-body interventions consistent with both systems, including yoga and weight management in PCOS, have the clearest supporting evidence and minimal risk[4,18].

CONCLUSION

Vandhyatva, understood through the four essentials of conception, offers an Ayurvedic model of female infertility that corresponds closely to modern diagnostic categories and can guide individualised care. Published studies of Shodhana, Basti, Uttara basti and

oral formulations report encouraging rates of ovulation, tubal patency and conception, but rest on small and largely uncontrolled samples. Adequately powered randomised trials that use live birth as the primary outcome, apply standard fertility investigations and report safety systematically are needed before these approaches can be firmly recommended in integrative fertility care.

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