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AYURVEDIC MANAGEMENT OF MULTIFACTORIAL INFERTILITY ASSOCIATED WITH PCOD, PID, LOW AMH, AND UNILATERAL TUBAL-OVARIAN LOSS LEADING TO CONCEPTION: A CASE STUDY

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ABSTRACT

Polycystic Ovarian Disease (PCOD) and Pelvic Inflammatory Disease (PID) are among the leading causes of female infertility, often resulting in ovulatory dysfunction, tubal damage, and hormonal imbalance.[1,2] In women with low Anti-Müllerian Hormone (AMH) levels, the prognosis for conception becomes further compromised due to diminished ovarian reserve,[3] Endometriosis further compounds reproductive challenges by disrupting ovarian function, impairing implantation, and contributing to chronic pelvic inflammation.[4] Conventional management typically involves hormonal therapy, ovulation induction, or assisted reproductive techniques (ART), which may not yield sustainable outcomes and often carry physical and emotional burdens.[5] Ayurveda provides a comprehensive, individualized approach aimed at correcting underlying dosha imbalances, enhancing ovarian function, improving tubal patency, and rejuvenating reproductive tissues through *rasayana* and *garbhasthapaka* interventions.[6] This case study presents a 31-year-old woman with a 5-year history of secondary infertility following a biochemical pregnancy, diagnosed with PCOD, chronic PID, endometriosis, low AMH (0.793 ng/mL) and history of right salpingectomy. Ultrasound findings showed the right ovary not visualized, while the left ovary exhibited multiple small follicles with a polycystic appearance. The patient experienced irregular menses, lower abdominal pain, and leucorrhea. An Ayurvedic

management protocol was implemented over eight months, including the Gynoveda's proprietary formulations—*Poshini, Upaja, Myrha, Jivani, and Vayu*. Following treatment, the patient demonstrated improved menstrual regularity, reduced pelvic pain, and normalized vaginal discharge. Conception was achieved spontaneously within eight months of treatment. This case highlights the potential efficacy of Ayurvedic interventions in restoring fertility and reproductive health in complex cases involving combined ovarian and tubal factors with diminished ovarian reserve.

KEYWORDS: PCOD, PID, Low AMH, Ayurveda, Infertility, Salpingectomy, Ovarian function.

INTRODUCTION

Infertility affects approximately 10–15% of couples worldwide, with female factors contributing to nearly half of all cases. Among these, Polycystic Ovarian Disease (PCOD), Pelvic Inflammatory Disease (PID), and endometriosis are prominent etiological contributors, often interlinked through complex pathophysiological mechanisms that impair ovulation, compromise tubal integrity, and disrupt endometrial receptivity.[1,2]

PCOD is a complex endocrine–metabolic disorder marked by anovulation, hyperandrogenism, insulin resistance, and chronic low-grade inflammation.[1] PID results from ascending genital infections causing fibrosis, adhesions, and tubal obstruction, while endometriosis contributes to ectopic endometrial growth, pelvic adhesions, and hormonal imbalance.[2] When PCOD, PID, and endometriosis coexist, the cumulative impact on reproductive function is profound, particularly in women with low AMH levels indicating reduced ovarian reserve (1–4). Conventional treatments—hormonal therapy, antibiotics, and ART—often provide limited or temporary benefit and pose significant physical, emotional, and financial burdens, especially in those with unilateral ovarian-tubal loss. Furthermore, right salpingectomy adds to the fertility challenge by eliminating one functional fallopian tube, thereby reducing the chances of natural conception.[5]

Ayurveda provides a comprehensive, individualized framework for infertility management by addressing the root causes through *Dosha* balancing, *Agni* enhancement, *Srotoshodhana* (channel purification), and *Rasayana* (tissue rejuvenation) therapies. From an Ayurvedic perspective, PCOD, PID, and endometriosis are considered manifestations of *Vata–Kapha* imbalance and *Avarana* (obstruction) in the *Artavavaha Srotas* (reproductive channels).

Kapha aggravation contributes to cystic and inflammatory processes, while vitiated *Vata* leads to irregular ovulation, pelvic pain, and tubal dysfunction.[5]

This case report presents the successful conception in a 31-year-old woman with a 5-year history of secondary infertility following a biochemical pregnancy, diagnosed with PCOD, chronic PID, endometriosis, low AMH (0.793 ng/mL), and right salpingectomy. Managed exclusively through Ayurvedic interventions, the case demonstrates the ability of Ayurveda in restoring fertility and reproductive harmony by holistically addressing ovarian, tubal, and endometrial factors through systemic balance and rejuvenation.

CASE REPORT

Patient Information

A 31-year-old female presented with complaints of secondary infertility persisting for the past three years. She reported a history of irregular menstrual cycles since menarche, accompanied by progressively increasing dysmenorrhea and pelvic discomfort over the preceding two years. Additional symptoms included abnormal white vaginal discharge, occasional abdominal bloating, and generalized fatigue.

Her previous investigations indicated the presence of Polycystic Ovarian Disease (PCOD), chronic Pelvic Inflammatory Disease (PID), endometriosis, and low Anti-Müllerian Hormone (AMH) levels. The patient had experienced a biochemical pregnancy five years earlier, confirming her prior conception potential. Laparoscopic evaluation performed one year before presentation revealed right salpingectomy, non-visualization of the right ovary, and dense adhesions involving the uterus and adnexal structures.

Based on these findings, she was counseled regarding the poor prognosis for natural conception and advised to pursue assisted reproductive techniques (ART). However, due to personal preferences and financial constraints, the patient chose to undergo exclusive Ayurvedic management for fertility restoration and overall reproductive health optimization.

Menstrual History

Table 1-Menstrual History of Patient.

Parameter	Details
Cycle Regularity	Irregular
Duration	4-5 days
Dysmenorrhea	Moderate

No. of pads per cycle	16 pads
Breakthrough Bleeding	Absent
Presence of Blood Clots	Present (occasionally)

Fertility Treatment History

The patient had received multiple hormonal treatments and ovulation induction cycles over the past three years, all unsuccessful. She was advised IVF due to low AMH and unilateral tubal-ovarian loss but did not pursue ART.

Obstetric History

$G1P1L0A1D_0$ (History of Biochemical pregnancy)

General Health Examination

Table 2 – Patient Vital Signs.

Vitals	Values
Pulse	82/min
BP (Blood Pressure)	122/82 mmHg
Respiratory Rate (RR)	21/min
SPO2 (Oxygen Saturation)	98%

Other Examinations

Table 3- General Examinations.

Parameter	Observation
Naadi Pariksha	Vata
Appetite	Normal
Bowel	Normal
Sleep	Normal
Energy Levels	Normal

Personal History

Table 4– Personal History of Patient.

Alcohol Consumption	No
Smoking	No
Junk Food Intake	Frequently (3-4 times a week)
Spicy Food Intake	Regularly
Sleep Schedule	Irregular; frequent late nights
Physical Activity	Sedentary Lifestyle
Stress Levels	High (family and work stress)

Sexual History

Table 5 – Sexual History of Patient.

Vaginal Dryness	No
Dyspareunia	Yes
Loss of Libido	Yes

Past Medical/Surgical History

- History of **right salpingectomy** four years ago.
- **Right ovary not visualized** on laparoscopy, suggestive of dense adhesions.
- **PCOD (left ovary)** diagnosed 4 years ago.
- **PID** treated multiple times with antibiotics without sustained relief.
- History of endometriosis seven years back
- No other major systemic illness.

Diagnostic Investigations

Table 6- Diagnostic Investigations.

Test	**Findings**
USG Pelvis (1st consultation)	Right ovary not visualized; left ovary enlarged (32×26 mm) with multiple small follicles; bulky uterus with normal endometrial thickness (7 mm); mild pelvic adhesions, free fluid in POD
AMH	0.793 ng/mL (before treatment)
Thyroid Profile	Within normal limits
CBC/ESR	Mild leukocytosis and elevated ESR (indicative of chronic inflammation)
Ultrasound (8th month)	Left ovary normalizing in size; follicles of normal morphology; endometrial thickness 8.5 mm; no fluid collection in pouch of Douglas

Treatment and Management

Table 7- Treatment and Management.

Medicine given	**Ingredients/Contents**	**Dosage**
1. Tab. Myrha (1g)	*Kutaj Twak Churna, Patola Churna, Katuki Churna, Shuddha Shilajit, Trikatu Churna, Trijat Churna, Yashad Bhasm , Kanchanar, Varuna, Ashwagandha, Haridra, Amalaki, Methi, Saptarangi, Asana, AVartika, Jambu, eshashringi, Mamejava, Guduchi, Bilva, Nimba, Karvellak, preservatives and excipients.*	2 pills after break fast and2 pills after dinner
2. Tablet Vayu (500 mg)	*Haritaki, Triphala, Rasna,Shunthi, Ashwagandha, Gokshur*	2 pills at Night
3. Tablet Upaja (500 mg)	*Kumari, Shuddha Kasis, Dalchini, Sonth, Gulkand*	2 pills after breakfast and 2 pills after dinner
4. Tablet Poshini (600 mg)	*Shuddha Hingul, Bang hasma, Shivlingi, Shatavari, Ashwagandha, Jivanti, Putranjivak*	2 pills after breakfast and 2 pills after dinner
5. Tablet Jivani (750 mg)	*Shuddha Hingul, Bang Bhasma, Karanja, Khadir, Asvattha, Shirish, Shalmali*	2 pills after breakfast and 2 pills after dinner

Lifestyle & Dietary Advice

- Balanced diet emphasizing fresh fruits, vegetables, ghee, and warm water.
- Avoidance of processed, cold, and heavy (*guru*) foods.
- Daily moderate exercise (30 minutes).
- Regular sleep (10 PM–6 AM).
- Stress management through *pranayama* and *music therapy*.

Table 8- Month on Month Improvement.

Month on month improvement seen in patient.

Month	Key Observation	Clinical Significance
1st Month	Improved digestion, reduced bloating, and regular bowel movements	*Agni Deepana* (stimulation of digestive fire) and reduction of Ama (metabolic toxins), preparing the body for systemic detoxification
2nd Month	Reduced period pain and clotting	Hormonal regulation and Vata–Kapha Shamana (dosha pacification), restoration of normal ovulatory rhythm
3rd Month	Marked reduction in leucorrhea and pelvic discomfort	Anti-inflammatory action and *Srotoshodhana* (purification of reproductive channels), enhancing pelvic circulation
4th Month	Improved energy, libido, and emotional stability; normalized sleep	Rasayana (rejuvenative) and adaptogenic effects leading to neuroendocrine balance and improved psychosexual health
5th Month	Ultrasound showed normal left ovarian follicular growth and endometrial thickness (8.5 mm); slight rise in AMH (0.793 → 0.92 ng/mL), no free fluid in pouch of douglas	Restoration of folliculogenesis, enhanced endometrial receptivity, and early signs of improved ovarian reserve
6th Month	Continued absence of pelvic pain and discharge	Maintenance of hormonal harmony, preparing the system for conception
7th Month	Overall improved condition sustained	Follicular quality, luteal competence, and endometrial readiness for implantation
8th Month	Spontaneous conception confirmed (UPT and β-HCG positive); early pregnancy maintained with normal scan findings	Successful ovulation, fertilization, and implantation achieved through restoration of reproductive balance and Garbhasthapaka (pregnancy-sustaining) effects

DISCUSSION

This case presents a 31-year-old woman with a complex infertility profile involving Polycystic Ovarian Disease (PCOD), chronic Pelvic Inflammatory Disease (PID), endometriosis, low Anti-Müllerian Hormone (AMH) levels (0.793 ng/mL), and unilateral tubal-ovarian loss following right salpingectomy.[1,2,3]

Each of these conditions independently contributes to subfertility, and their coexistence considerably lowers the likelihood of conception. PID is an ascending infection of the upper genital tract that leads to tubal scarring, pelvic adhesions, and chronic inflammation, often resulting in mechanical obstruction of gamete transport and impaired endometrial receptivity.[2] Endometriosis adds to the inflammatory milieu by promoting ectopic endometrial proliferation, elevated cytokines, and oxidative stress, which further disrupt follicular development and implantation potential.[4] Low AMH indicates diminished ovarian reserve and poor follicular response, whereas unilateral tubal-ovarian loss significantly compromises the chances of natural conception by reducing the site for ovulation and fertilization by half.[3] Thus, the cumulative effect of these pathologies renders such cases highly resistant to conventional fertility treatments, where ART is typically recommended as the only viable option.

In this case, Ayurvedic management was adopted as a non-invasive, holistic alternative that addressed the root causes through improvement of immunity, detoxification, rejuvenation, and reproductive tissue nourishment. The protocol combined the formulations *Poshini, Myrha, Upaja, Jivani, and Vayu,* each contributing synergistically to reproductive restoration.

Poshini, containing *Shatavari, Ashwagandha, Jivanti, Shivlingi,* and *Putranjivak,* acts as a potent garbhasthapaka and rasayana, promoting ovarian nourishment, oocyte quality enhancement, and endometrial receptivity. *Shatavari* and *Jivanti* are known for their phytoestrogenic effects that enhance follicular maturation and uterine lining development, while Ashwagandha supports hypothalamic–pituitary–ovarian axis balance and reduces stress-induced anovulation.[7,8]

Myrha, comprising *Kutaj Twak, Katuki, Shuddha Shilajit, Trikatu, Kanchanar, Varuna, and Ashwagandha,* primarily targets PCOD and metabolic dysfunction. Its contents exhibit kapha-vata shamaka and lekhana (scraping) properties, facilitating cyst dissolution, insulin sensitivity improvement, and weight and androgen level normalization. Ingredients like *Trikatu* and *Katuki* aid hepatic detoxification and enhance insulin receptor responsiveness, while *Kanchanar* and Varuna promote granthi (cystic growth) resolution and support ovarian follicle normalization.[7,8]

Upaja, formulated with *Kumari, Shuddha Kasis, Dalchini, Sonth, and Gulkand*, functions as an ovulation-supportive and uterine stimulant formulation. *Kumari* (Aloe vera) supports

follicular growth, timely ovulation, and healthy cervical mucus formation, whereas *Kasis* and *Dalchini* improve uterine circulation and endometrial receptivity, facilitating implantation.[7,8]

Jivani, containing *Hingul, Karanja, Khadir, Shirish, and Shalmali,* addresses the infective and inflammatory components of PID. These herbs possess antimicrobial, anti-inflammatory, and immunomodulatory properties that aid in clearing residual infections, reducing pelvic congestion, and preventing reinfection. Simultaneously, they contribute to endometrial rejuvenation, ensuring a receptive environment for implantation and embryo growth.[7,8]

Vayu, with *Haritaki, Triphala, Rasna, Shunthi, Ashwagandha, and Gokshur*, corrects vata imbalance, alleviating pelvic pain, dysmenorrhea, and irregular cycles. It also enhances systemic circulation and tissue oxygenation, optimizing reproductive function.[7,8]

This outcome highlights the potential of integrative Ayurvedic treatment in addressing multifactorial infertility, particularly where conventional methods offer limited prognosis. The formulations acted through a multi-dimensional mechanism — improving endocrine balance, reducing inflammation, enhancing oocyte and endometrial quality, and restoring reproductive homeostasis — leading to the successful restoration of fertility.

CONCLUSION

The Ayurvedic intervention demonstrated significant clinical improvement in this complex case of secondary infertility associated with PCOD, chronic PID, endometriosis, low AMH, and right salpingectomy. The comprehensive, individualized management—employing formulations such as *Poshini, Upaja, Myrha, Jivani, and Vayu*—helped stimulate follicular growth and rupture, restore menstrual regularity, relieve leucorrhea and dysmenorrhea, and reduce ovarian bulkiness. By addressing the root causes through metabolic correction, hormonal balance, and tissue rejuvenation with quality restoration of the gametes and uterus endometrium, this case highlights the effectiveness of Ayurvedic protocols in improving fertility outcomes even in patients with multiple contributing factors and diminished ovarian reserve.

Although conventional options of modern medicine often focus on symptomatic or supportive management, the Ayurvedic approach in this case worked at a more foundational level to rejuvenate reproductive health and support natural conception. Remarkably, despite the patient's right salpingectomy and non-visualization of the right ovary, conception

occurred naturally within eight months of Ayurvedic treatment—an outcome that proves the regenerative and restorative ability of Ayurvedic medicine. Hence, this outcome exemplifies the strength of Ayurveda as a holistic and evidence-worthy system of medicine for infertility care.

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