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Uterine Fibroid as a Contributory Factor in Recurrent Urinary Tract Infection: A Case Report with Review of Unani Literature

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ABSTRACT

Uterine fibroids (leiomyomata uteri) are among the most prevalent benign pelvic tumours affecting women of reproductive age. While their classical presentations include menorrhagia, pelvic pain and pressure symptoms, their role as a mechanical precipitant of recurrent urinary tract infections (UTIs) remains under-recognised. We present the case of Ms. Asiya, a 22-year-old female registered at Ajmal Khan Tibbiya College Hospital, Aligarh Muslim University, Aligarh (Registration No. 2026000817, Date: 18/02/2026) under the care of Dr. Fahmeeda Zeenat, MS, who presented with recurrent lower urinary tract symptoms. Clinical and sonographic evaluation identified an anterior intramural uterine fibroid exerting compressive effects on the urinary bladder as the underlying aetiology. The present report also undertakes a dedicated review of Unani classical literature pertaining to Warme Reham (uterine tumour), Ihtibas al-Bawl (urinary retention/obstruction) and Su'al al-Bawl (urinary frequency), the concept of Sue Mizaj (dyscrasia), relevant Unani drugs with mudir-e-bawl (diuretic), muhallil-e-waram (anti-inflammatory/anti-tumour) and qabiz (astringent/haemostatic) properties, and the classical formulations applicable to this clinical scenario. The case underscores the importance of gynaecological evaluation in young women with recurrent UTIs and demonstrates the complementary value of Unani medicine in their comprehensive management.

Keywords: Uterine fibroid; Warme Reham; Recurrent UTI; Su'al al-Bawl; Ihtibas al-Bawl; Unani medicine; Leiomyoma; Bladder compression; Sue Mizaj; Mudir-e-Bawl.

INTRODUCTION

Uterine fibroids, or leiomyomata uteri, represent the most common benign pelvic tumours in women of reproductive age, with an estimated prevalence of 20–40% in women above 30 years, and an increasingly recognised occurrence in younger women [1]. While the classical triad of menorrhagia, dysmenorrhoea and pelvic pressure is well described, bladder-related complications — particularly recurrent urinary tract infections (UTIs) — are often overlooked as a presenting feature, especially in younger patients without conventional risk factors [2].

Recurrent UTIs, defined as two or more symptomatic episodes within six months or three or more within one year, impose a significant burden of morbidity, repeated antibiotic courses and compromised quality of life [3]. In the absence of common precipitants such as diabetes mellitus, vesico-ureteric reflux or neurological bladder dysfunction, an underlying gynaecological aetiology — such as an anteriorly placed uterine fibroid exerting mass effect on the bladder neck or urethra — should be actively excluded [4].

The Unani system of medicine, rooted in the Greco-Arabic humoral tradition, provides a rich framework for understanding such presentations. Classical Unani scholars described uterine pathologies including Warme Reham (uterine tumour/swelling), their impact on adjacent organs, and elaborate pharmacopoeial approaches to their management. The present case offers an opportunity to explore both the modern pathophysiological basis and the Unani literary perspective on this clinico-gynaecological association.

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Case Presentation

Patient details are summarised in the table below:

Parameter	Details
Name	Ms. Asiya
Age / Sex	22 Years / Female
Patient Type	General (OPD)
Address	Shahjamal, Aligarh, Uttar Pradesh
Registration No.	2026000817 (UHID: 2026000817)
Token No.	6
Date of Registration	18/02/2026, 09:58 AM
Treating Physician	Dr. Fahmeeda Zeenat, MS
OPD / Ward	Building 1, Ground Floor, OPD 04
Doctor Days	Wednesday, Friday
MLC Patient	No
Registration Amount	Rs. 20

Chief Complaints

1. Frequent and burning micturition persisting for several months with recurrent episodes.
2. Lower abdominal heaviness and pelvic discomfort.
3. Recurrent UTIs treated with antibiotics on at least three prior occasions over the preceding year, with temporary relief and subsequent recurrence.
4. Heavy menstrual bleeding with passage of clots (menorrhagia) for approximately one year.

History

The patient denied any history of diabetes mellitus, renal calculus disease, vesico-ureteric reflux or neurological disorder. Menstrual history revealed heavy, prolonged periods for approximately one year. No prior surgical history, tuberculosis or significant family history was elicited. The patient was a resident of Shahjamal, Aligarh, with no history of recent travel or exposure to endemic infections.

Examination Findings

General physical examination was unremarkable. Pallor was noted, consistent with chronic blood loss. Abdominal examination revealed a firm, non-tender, lower abdominal pelvic mass arising from the pelvis. Per-speculum and bimanual examination (performed with appropriate consent) revealed an enlarged, irregular uterus estimated at approximately 10–12 weeks size. No cervical motion tenderness was elicited.

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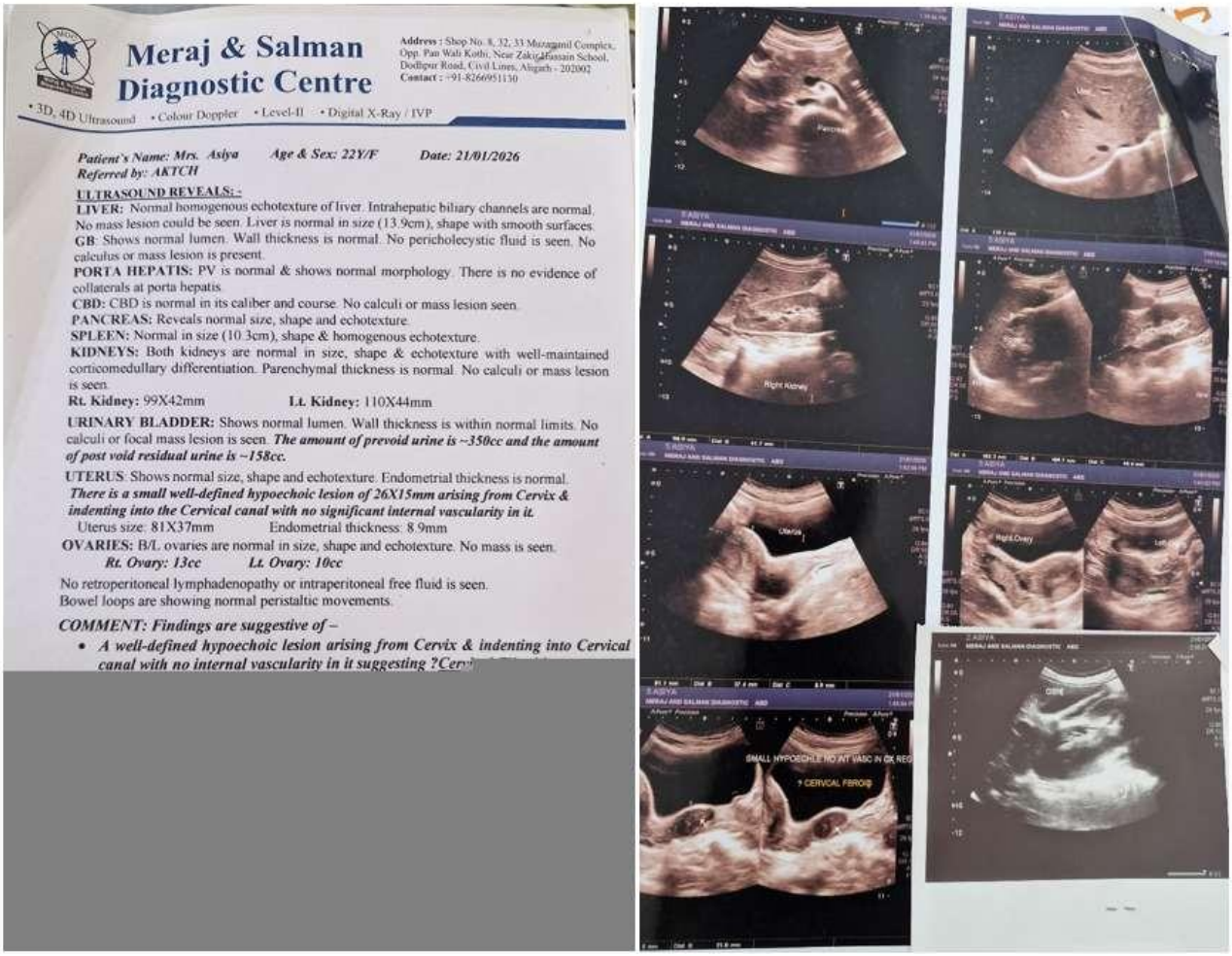
Investigations

Pelvic ultrasonography confirmed an intramural uterine fibroid measuring approximately 5 × 4 cm in the anterior uterine wall, with the anterior fibroid impinging upon the posterior wall of the urinary bladder. Urine culture demonstrated Escherichia coli sensitive to nitrofurantoin and fosfomycin. Haemoglobin was 9.2 g/dL, consistent with chronic menstrual blood loss. Renal function tests were within normal limits. Post-void residual urine volume on ultrasonography was elevated at 85 mL, confirming incomplete bladder emptying.



Meraj & Salman Diagnostic Centre

Address : Shop No. 8, 32, 33 Muzammil Complex, Opp. Pan Wali Kothi, Near Zakir Hussain School, Dodhpur Road, Civil Lines, Aligarh - 202002
Contact : +91-8266951130

• 3D, 4D Ultrasound • Colour Doppler • Level-II • Digital X-Ray / IVP

Patient's Name: Mrs. Asiya *Age & Sex: 22Y/F* *Date: 21/01/2026*
Referred by: AKTCH

ULTRASOUND REVEALS: -

LIVER: Normal homogenous echotexture of liver. Intrahepatic biliary channels are normal. No mass lesion could be seen. Liver is normal in size (13.9cm), shape with smooth surfaces.
GB: Shows normal lumen. Wall thickness is normal. No pericholecystic fluid is seen. No calculus or mass lesion is present.
PORTA HEPATIS: PV is normal & shows normal morphology. There is no evidence of collaterals at porta hepatis.
CBD: CBD is normal in its caliber and course. No calculi or mass lesion seen.
PANCREAS: Reveals normal size, shape and echotexture.
SPLEEN: Normal in size (10.3cm), shape & homogenous echotexture.
KIDNEYS: Both kidneys are normal in size, shape & echotexture with well-maintained corticomedullary differentiation. Parenchymal thickness is normal. No calculi or mass lesion is seen.
Rt. Kidney: 99X42mm **Lt. Kidney:** 110X44mm
URINARY BLADDER: Shows normal lumen. Wall thickness is within normal limits. No calculi or focal mass lesion is seen. ***The amount of prevoid urine is ~350cc and the amount of post void residual urine is ~158cc.***
UTERUS: Shows normal size, shape and echotexture. Endometrial thickness is normal.
There is a small well-defined hypoechoic lesion of 26X15mm arising from Cervix & indenting into the Cervical canal with no significant internal vascularity in it.
Uterus size: 81X37mm Endometrial thickness: 8.9mm
OVARIES: B/L ovaries are normal in size, shape and echotexture. No mass is seen.
Rt. Ovary: 13cc ***Lt. Ovary: 10cc***
No retroperitoneal lymphadenopathy or intraperitoneal free fluid is seen.
Bowel loops are showing normal peristaltic movements.

COMMENT: Findings are suggestive of –
- ***A well-defined hypoechoic lesion arising from Cervix & indenting into Cervical canal with no internal vascularity in it suggesting ?Cervi***

UNANI LITERATURE REVIEW

The Unani system of medicine, derived from the Hippocratic-Galenic tradition and enriched by contributions of Arab and Persian scholars, provides a comprehensive framework for understanding diseases of the female reproductive tract and urinary system. The following review integrates relevant classical Unani concepts with the present clinical scenario.

Concept of Warme Reham (Uterine Tumour / Swelling)

The term Waram (plural: Awram) in Unani medicine refers broadly to any abnormal swelling or tumour, characterised by an increase in volume of an organ due to accumulation of a humour or morbid matter. Ibn Sina in Al-Qanoon Fil Tib (Canon of Medicine) devotes an extensive section to Amraze Reham (diseases of the uterus) and classifies uterine swellings on the basis of the dominant humour involved [6].

Warme Reham is described as arising from one of four predominant humours:

. Warme Dami Reham — arising from Damwi (sanguineous) dyscrasia: characterised by a hard, vascular swelling with associated menorrhagia, corresponding most closely to the modern entity of uterine fibroid/leiomyoma.

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. Warme Balgham Reham — arising from Balgham (phlegmatic) humour: softer consistency, often associated with leucorrhoea and oedematous swelling.

. Warme Safrawi Reham — Safrawi (bilious) origin: associated with heat, inflammation and dysmenorrhoea.

. Warme Sawdawi Reham — Sawdawi (melancholic/black bile) origin: hardest consistency, associated with the classical description of Saratan-e-Reham (uterine cancer).

Al-Majoosi in Kamil al-Sana'a states that Warme Dami Reham arises when excess Damwi humour accumulates in the uterine tissues, leading to abnormal growth. He attributes this to Suue Mizaj Maddi Damwi (material sanguineous dyscrasia) of the uterus. Jurjani in Zakhira-e-Khwarazm Shahi similarly describes uterine swellings arising from Ghilzat-e-Dam (thickening/abnormality of blood) accumulating in the uterine wall [7,8].

Ibn Rushd in Kitab al-Kulliyat describes the uterus as possessing five functional faculties (Quwa): Jazeba (attracting), Masika (retaining), Hafiza (protecting), Da'afa (expelling) and Mumayaza (differentiating). A Warme Dami Reham weakens the Quwa Masika and Quwa Da'afa, thereby disturbing normal menstrual flow and producing excess bleeding, while its mass effect on neighbouring organs (including Mathana – the urinary bladder) produces pressure symptoms [9].

Anatomy of Urinary Tract in Unani Medicine: Mathana and Masalik al-Bawl

Classical Unani physicians demonstrated a clear understanding of urinary tract anatomy and physiology. Ibn Sina describes the Mathana (urinary bladder) as a muscular organ receiving urine from the Kullya (kidneys) via the Haalibain (ureters), and expelling it through the Ikleel (urethra). The process of normal micturition is governed by the Quwa Da'afa (expulsive faculty) of the bladder [6].

Al-Majoosi in Kamil al-Sana'a elaborates that the urinary bladder lies in close proximity to the uterus in women (Rahim), and any Waram or Khilfat (abnormality) of the uterus may exert pressure on the Mathana, impairing its Quwa Da'afa and causing either Ihtibas al-Bawl (retention/incomplete emptying) or Su'al al-Bawl (frequency of urination) [2].

Razi in Al-Hawi fi al-Tibb specifically discusses urinary complaints in women arising from uterine pathology and recommends simultaneous treatment of the primary uterine condition along with supportive measures for the bladder [10].

Ihtibas al-Bawl and Su'al al-Bawl: Urinary Complications Secondary to Warme Reham

The Unani concept of Ihtibas al-Bawl (urinary obstruction/incomplete emptying) is directly relevant to the mechanism of recurrent UTIs in the present case. Stasis of urine within the Mathana due to incomplete emptying — a consequence of mechanical compression by an anterior Warme Reham — corresponds precisely to the modern pathophysiology of elevated post-void residual volume predisposing to bacterial colonisation.

Ibn Sina in Al-Qanoon Fil Tib identifies Ihtibas al-Bawl arising from Waram of adjacent organs as one of the aetiological categories of urinary retention. He distinguishes it from Ihtibas arising from Hasae al-Mathana (bladder calculus) or Ziqa al-Ikleel (urethral stricture). For women, he specifically notes that enlargement of the Reham (uterus) from any cause may impede the normal flow of urine [6].

Su'al al-Bawl (urinary frequency/urgency), described separately in Unani texts, may co-exist with incomplete emptying when the enlarged uterus irritates the bladder wall — a mechanism identical to the modern concept of overactive bladder from extrinsic mass effect.

Humaira or Humma al-Bawl (fever accompanying urinary complaints) is also described in Unani literature as an accompaniment of Waram-induced urinary stasis, corresponding to the febrile episodes seen in UTI. Al-Majoosi recommends this be treated simultaneously with the primary uterine pathology [2].

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Sue Mizaj: The Humoral Basis

The foundational Unani concept explaining the pathogenesis in this case is Sue Mizaj Maddi Damwi (material sanguineous dyscrasia). Excess and morbid Damwi humour accumulates in the uterine tissue, leading to abnormal proliferation (Warme Reham) and simultaneously produces excess menstrual blood loss (Ifrat-e-Haiz / Kathrat-e-Haiz), corresponding to the patient's menorrhagia [6,7].

The consequent weakening of the Quwa of the Reham and the mechanical pressure on the Mathana leads to the secondary urinary manifestations. This integrated humoral explanation provides a unified pathophysiological framework linking the fibroid, the menorrhagia and the recurrent UTIs — all observed in the present patient.

Unani Drugs with Relevance to Warme Reham and Urinary Complications

Classical Unani pharmacopoeias describe a large number of single drugs applicable to this clinical scenario. These may be classified on the basis of their primary action:

Unani Drug (Botanical Name)	Primary Action	Classical Reference
Gule Neem / Neem flower (Azadirachta indica)	Muhallil-e-Waram (anti-inflammatory), anti-oestrogenic, antifertility	Khazainul Advia [11]; experimentally validated [12]
Gurhal / Shoe-flower (Hibiscus rosa sinensis)	Muhallil-e-Waram, oestrogenic modulator, anti-haemorrhagic	Makhzan al-Advia; validated post-coitally [13]
Tukhme Karchoof / Artichoke seed (Cynara scolymus)	Mudir-e-Bawl (diuretic), hepatoprotective, humoral purifier	Al-Qanoon Fil Tib [6]
Asgand / Ashwagandha (Withania somnifera)	Muqawwi-e-Reham (uterine tonic), adaptogenic, anti-inflammatory	Zakhira-e-Khwarazm Shahi [8]
Sumbul al-Teeb / Spikenard (Nardostachys jatamansi)	Mudir-e-Bawl, Musakkin (analgesic), anti-spasmodic for bladder	Kamil al-Sana'a [2]
Kalonji / Black seed (Nigella sativa)	Mudirr-e-Haiz (emmenagogue), anti-inflammatory, mudir-e-bawl	Al-Hawi fi al-Tibb [10]
Afsanteen / Wormwood (Artemisia absinthium)	Mudirr-e-Haiz, eliminates morbid humours, anti-parasitic	Khazainul Advia [11]
Tukhme Karafs / Celery seed (Apium graveolens)	Mudir-e-Bawl, anti-inflammatory for urinary tract, bladder tonic	Al-Qanoon Fil Tib [6]
Badiyan / Fennel (Foeniculum vulgare)	Mudir-e-Bawl, muqawwi-e-mathana (bladder tonic), carminative	Makhzan al-Advia [11]
Kharbaq Siyah / Black hellebore (Helleborus niger)	Muhil (purgative of morbid humour), muhallil-e-waram	Al-Qanoon Fil Tib [6]

Classical Unani Formulations Applicable to this Case

Unani classical texts describe compound formulations combining drugs with complementary actions for the management of Warme Reham and associated urinary symptoms. The following formulations are particularly relevant:

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Formulation	Composition / Action	Indication
Jawarish Mastagi	Mastagi (Pistacia lentiscus), Zanjabeel, Za'faran – qabiz, muqawwi-e-meda wa reham	Warme Reham, menorrhagia, pelvic heaviness
Hab-e-Asgand	Withania somnifera base – muqawwi-e-reham, adaptogenic tonic	Uterine weakness, haemostatic, reproductive tonic
Qurs Khatmi	Althaea officinalis – mulayyim (demulcent), muhallil, anti-inflammatory	Bladder irritation, urinary burning, UTI supportive
Sharbat Bazoori Motadil	Tukhme Khayareen, Tukhme Kadu, Tukhme Badiyan, Tukhme Karafs – mudir-e-bawl compound	Urinary frequency, burning micturition, cystitis
Majoon Chobchini	Chobchini (Smilax china), muqatta' – blood purifier, eliminates Damwi morbid humour	Damwi dyscrasia underlying Warme Reham
Habb-e-Mudir	Compound diuretic formulation – mudir-e-bawl, reduces urinary stasis	Ihtibas al-Bawl, recurrent UTI from stasis
Roghan Neem / Neem oil (Azadirachta indica)	Local application – muhallil-e-waram, antimicrobial	Adjunctive in Warme Reham, local anti-infective
Arq Badiyan	Distillate of Foeniculum vulgare – mudir-e-bawl, anti-spasmodic	Urinary frequency, bladder spasm

Unani Tadabeer (Regimens) for Warme Reham

Beyond pharmacotherapy, Unani physicians described a range of Tadabeer (physical/dietary regimens) for the management of Warme Reham:

Tadbeer-e-Ghiza (Dietary regulation): A Damwi-balancing diet avoiding Muwallidat-e-Dam (blood-generating foods) such as red meat and sweet heavy foods. Emphasis on light, easily digestible foods including pomegranate (Rumman), barley water (Maa al-Sha'ir) and lentil soup.

Istinja and Genital Hygiene (Nazafat-e-Furj): Unani physicians emphasised perineal cleanliness and use of Qasat al-Bawl (appropriate voiding posture and complete bladder emptying) to prevent urinary stasis.

Hammam (Medicated bath): Warm sitz baths (Neem-e-Hamam) with decoctions of Khatmi (Althaea officinalis), Baboona (Matricaria chamomilla) and Afsanteen (Artemisia absinthium) were prescribed to relieve pelvic congestion and reduce Warme Reham.

Irsaal al-Alaq (Hirudotherapy / Leech application): Al-Majoosi and Ibn Sina recommended leech application to the perineum and around the vulva in Damwi Warme Reham to reduce local blood congestion [6,2].

Riyazat (Regulated exercise): Moderate physical activity was advised to improve general circulation and reduce humoral stasis.

DISCUSSION

Modern Pathophysiological Perspective

Uterine fibroids may cause recurrent UTIs through direct mechanical compression of the urinary bladder. An anteriorly situated fibroid — as confirmed sonographically in the present case — may elevate post-void

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residual urine volume by impairing complete bladder evacuation, creating a static column of urine that facilitates bacterial colonisation and recurrent infection [4,5]. The finding of an elevated post-void residual of 85 mL in this patient directly supports this mechanism.

The young age of the patient (22 years) and the absence of conventional UTI risk factors (diabetes, urological structural anomaly, neurological bladder dysfunction) make the fibroid the most plausible and likely aetiological factor for the recurrence. Urine culture confirming E. coli infection is consistent with standard ascending bacterial UTI facilitated by urinary stasis.

Unani Perspective and Integration

From the Unani perspective, the present case represents a classic presentation of Warme Dami Reham — a Damwi dyscrasia-driven uterine swelling producing mechanical pressure on the adjacent Mathana (bladder), impairing its Quwa Da'afa and leading to Ihtibas al-Bawl (incomplete emptying) and subsequent Su'al al-Bawl (urinary frequency and infection). The associated Ifrat-e-Haiz (menorrhagia) and Fuqdan al-Dam (anaemia) further confirm the Damwi humoral excess as the underlying Sue Mizaj [6,7,8].

This integrative interpretation does not merely present Unani concepts as historical curiosities but demonstrates their mechanistic concordance with modern pathophysiology: Warme Reham (fibroid) → impaired Quwa Da'afa of Mathana (reduced bladder contractility / elevated residual urine) → Ihtibas al-Bawl (urinary stasis) → Humma al-Bawl and Su'al al-Bawl (recurrent UTI with fever and urinary frequency).

Management

The patient was commenced on nitrofurantoin based on sensitivity results for the current UTI episode. Oral haematinics were prescribed for anaemia. She was counselled regarding the fibroid and referred for further gynaecological evaluation to determine eligibility for medical or surgical intervention (myomectomy vs. medical management with tranexamic acid and progestogens) based on symptom severity and reproductive aspirations.

In accordance with the integrative model practiced at Ajmal Khan Tibbiya College Hospital, the following Unani pharmacological interventions were prescribed as adjunctive therapy:

Sharbat Bazoori Motadil X 20ml X BD – to relieve urinary symptoms (mudir-e-bawl).

Tab Bifilac X BD X 3days

Syrup Vitac Plus X 2tsf X 5days

Majoon Dabeedul ward (6gm) with Arq e Mako (50 ml) and Arq e Kasni (50ml) X 3months

Dietary advice: Avoidance of Muwallidat-e-Dam foods; increase in pomegranate, barley water and light foods.

These formulations are well documented in classical texts and have demonstrated preliminary scientific validation for their component drugs, supporting their adjunctive use. Further standardisation and clinical trial evidence is encouraged [12,13].

CONCLUSION

This case demonstrates that uterine fibroids, even in young women, may present primarily as recurrent urinary tract infections through a mechanism of mechanical bladder compression and elevated post-void residual volume. Gynaecological causes should be actively excluded in women of reproductive age presenting with recurrent UTIs where conventional risk factors are absent, and pelvic ultrasonography should be included in the routine work-up of such patients.

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The Unani system of medicine provides a sophisticated and internally consistent framework for understanding this clinical scenario through the concepts of Warme Dami Reham, Sue Mizaj Maddi Damwi, impaired Quwa of the Mathana and resultant Ihtibas al-Bawl. A rich pharmacopoeial tradition of drugs and formulations targeting uterine pathology and urinary symptoms offers a complementary therapeutic arsenal alongside modern gynaecological management. An integrative approach that combines the diagnostic precision of modern medicine with the holistic therapeutic framework of Unani medicine offers the most comprehensive and patient-centred management strategy for this condition.

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Conflict of Interest: Nil

Ethical Approval: Patient consent obtained. Institutional ethical guidelines followed. Patient identity protected.

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