A COMPARATIVE STUDY ON THE EFFICACY OF QURS-E-DEEDAN-E-JADEED AND ALBENDAZOLE IN DEEDAN-E-TIWAL (ASCARIASIS)

[1]Dr. Gulafshan Begum, [2]Dr. Ahsan Faroqui, [3]Dr. N. Narasimha [4]Dr. Mohammadi Begum

[1]PG Scholar, [2]PG Professor & HOD, [3]PG Professor [4]PG Scholar
[1]Department of Moalijat,
[1]Government Nizamia Tibbi College, Hyderabad, Telangana, India

Abstract: Ascariasis, caused by Ascaris lumbricoides, is one of the most common intestinal helminthic infections worldwide, particularly in developing countries with poor sanitation and hygiene. In Unani medicine, it is described as Deedan-e-Tiwal and is associated with humoral imbalance, especially predominance of Balgham and Sauda. Qurs-e-Deedan-e-Jadeed is a Unani formulation used for its anthelmintic, digestive strengthening, and humoral balancing properties.

Keywords: Ascariasis, Deedan-e-Tiwal, Unani Medicine, Qurs-e-Deedan-e-Jadeed, Helminthiasis, Anthelmintic Therapy

1. INTRODUCTION

Helminthic infestations continue to remain a significant public health concern across the globe, particularly in developing and underdeveloped nations where poor sanitation, unhygienic living conditions, and limited access to healthcare prevail. Among intestinal helminths, Ascaris lumbricoides is considered the most prevalent parasite infecting the human gastrointestinal tract. The disease caused by this parasite, known as Ascariasis, affects nearly one billion people worldwide, with the highest burden reported in Asia and sub-Saharan Africa. Children constitute the most vulnerable group due to their underdeveloped immunity, unhygienic habits, and higher likelihood of soil contact.

In modern biomedical science, ascariasis is characterized as an infection of the small intestine by the roundworm Ascaris lumbricoides. The parasite can cause abdominal pain, malnutrition, intestinal obstruction, anemia, and growth retardation in children. While the biomedical perspective is based on parasitology and epidemiology, traditional systems of medicine, particularly Unani Tibb, describe ascariasis within the broader concept of Deedan (worms). Unani scholars recognized the existence of intestinal worms centuries ago, long before the advent of modern microbiology. They classified worms based on morphology, sites of infestation, and associated clinical manifestations.

The Unani system of medicine, derived from the teachings of Hippocrates (Buqrat), Galen (Jalinoos), and further developed by eminent physicians such as Rhazes (Al-Razi), Avicenna (Ibn Sina), and Ismail Jurjani, provides a holistic understanding of parasitic infestations. In Unani literature, ascariasis is primarily referred to as Deedan-e-Am'a (worms of the intestines) or Deedan-e-Tiwal (long worms). These worms were believed to arise due to the putrefaction of humor, particularly Balgham (phlegm) and Sauda (black bile)—within the intestinal environment. Unani physicians emphasized the importance of humoral imbalance and dietary factors in the pathogenesis of ascariasis. Excessive intake of sweet, moist, and heavy food items was believed to weaken digestion and produce undigested residues in the gastrointestinal tract, which subsequently underwent fermentation and gave rise to worms. This perspective, although based on classical theories, resonates with modern findings linking helminthic infections with poor nutrition, unhygienic food habits, and compromised immunity.

The clinical features of ascariasis described in Unani literature remarkably overlap with modern clinical observations. Prominent symptoms such as abdominal pain, nausea, vomiting, disturbed sleep, teeth grinding, itching of the nose, and irritability in children were meticulously documented by Avicenna, Razi, and Jurjani. Complications such as intestinal obstruction and malnutrition were also recognized, highlighting the clinical acumen of medieval Unani physicians.

2. NEED OF THE STUDY

Ascariasis, caused by Ascaris lumbricoides, remains one of the most widespread soil-transmitted helminthic (STH) infections in India. The country's tropical climate, widespread poverty, inadequate sanitation, and high population density provide favorable conditions for transmission. Globally, nearly 800 million people are infected, and India alone contributes a substantial proportion

of this burden. Epidemiological surveys across different states of India have consistently reported variable prevalence rates, reflecting regional disparities in sanitation, hygiene, and socio-economic status. Community-based studies in Uttar Pradesh, Bihar, Assam, and Tamil Nadu have documented prevalence rates ranging from 15% to 60% in children, with peak infection intensity typically observed between 5 and 14 years of age. A multicentric study supported by the Ministry of Health and Family Welfare reported that nearly 22% of Indian school-aged children harbor at least one STH infection, with ascariasis being the most common. The highest prevalence is seen in rural areas and urban slums where open defecation and poor waste disposal practices facilitate fecal–oral transmission. Seasonal variation also plays a role, with higher infection rates recorded during the monsoon due to favorable conditions for egg survival in moist soil. Chronic infection is associated with malnutrition, stunted growth, anemia, and impaired cognitive development, making ascariasis not only a parasitic disease but also a public health challenge. To combat this, India has implemented large-scale deworming programs such as the National Deworming Day, launched in 2015, which targets school and preschool children with mass albendazole administration. These initiatives have contributed to a gradual decline in prevalence in several states, although reinfection remains a major challenge.

In summary, ascariasis continues to be highly prevalent in India, particularly among children in rural and resource-limited settings. Sustained mass deworming, coupled with sanitation improvement and health education, are essential to reduce its burden and long-term consequences.

3. RESEARCH METHODOLGY

3.1Population and Sample

The present study entitled "A Clinical Study of Deedan-e-Tiwal (Ascariasis Lumbricoid) & Its Management with Unani Medicine" was carried out in O.P.D Of Moalijat, Government Nizamia General Hospital, and Register Under CTRI-(Central Trail Registry India) CTRI/2024/10/075828, registered on 24/10/2024. The patients attending the OP and IP ward of Government Nizamia General Hospital, Hyderabad

3.2 Data and Sources of Data

The patients are selected by taking clinical history and general examinations, laboratory investigations, if possible.

Inclusion criteria:

- History of Passing an Adult Worm in Stool.
- Patient Complaining of Abdominal Pain, Fever Nausea/Vomiting Increase and decrease in Appetite.
- Allergic Manifestation, Itching, Urticaria.
- Both Gender
- Age between 14 – 45 years

Exclusion criteria:

- Severe Abdominal Pain, Severe Growth Retardation, Severe Anemia.
- Major Medical Illness.
- Patient with Severe Jaundice.
- Peritonitis.
- Evidence of Perforation.
- Pregnant & Lactating Women

Withdrawal criteria:

- Voluntary Withdrawal
- Any Adverse Effect of Medication.

Various Parameters were taken into consideration which are as follows:

Subjective parameters:

- Abdominal Pain
- Worm in Stool
- Anal Itching

Objective parameters:

- Stool examination
- AEC

Investigations:

- CBP, CRP, AEC, LFT, RFT
- Stool examination

Study design: An open labelled randomized controlled clinical trail

Duration of the protocol therapy: 14 days

Sample size: 40
[group a – 20]
[group b – 20]

Duration of study: 18 months

Follow -up: weekly once
Treatment plan:

Test drug: tab qurs-e-deedan-e-jadeed – 775 mg (od at bedtime with 1 glass of water up to 14 days).

- 2tab for adult
- 1tab for children

Composition of qurse deedane jadeed:

- Sat hanzal (citrullus colocynthis)-13.52mg
- Zanjabeel (zingiber officinale) -67.60mg
- Kamela (mallotus philippinensis)-338mg
- Haldi (curcuma longa)-135.20mg
- Gond keekar (acacia arabica) -67.60mg

Control drug: Single dose therapy of albendazole

- 400 mg for adult
- 200 mg for children

3.3 Statistical tools and econometric models

Descriptive and inferential statistical analysis has been carried out in the present study. Results on continuous measurements are presented on mean ±SD (Min-Max) and results on categorical measurements are presented in number (%). Significance is assessed at 5% level of significance. The following assumption on data is made.

- Dependent variables should be normally distributed.
- Sample drawn from the population should be random, cases of the sample should be independent.

The paired t-test is used to treat the null hypothesis that the average of the difference between a series of paired observation is zero. Student t-test (two tailed, dependent) has been used to find the significance of study parameters on continuous scale within each group.

Paired Proportion test has been used to find the significance of proportion in paired data. Smaller percentage of Improvement becomes significant at lower tail compared to higher tail. E.g., Improvement from 10% to 20% is difficult than the Improvement from 80% to 90%.

Software used: SPSS version 29

4. RESULTS AND DISCUSSION

4.1 Gender-wise Distribution

Male predominance was observed in both groups (70% in A, 65% in B), indicating higher exposure risk due to occupational and outdoor activities. Lower female incidence may be attributed to relatively reduced exposure and better hygienic practices.

4.2 Age-wise Distribution

Most patients belonged to 25–44 years, suggesting higher susceptibility among active, working-age individuals. Increased outdoor exposure and neglect of hygiene likely contribute to this trend.

4.3 Religion-wise Distribution

Muslims constituted the majority in both groups, reflecting regional demographic patterns rather than religious susceptibility. Environmental and lifestyle factors appear to play a more significant role.

4.4 Marital Status Distribution
Higher prevalence among married individuals indicates the role of shared living conditions and food habits in disease transmission. Household hygiene and sanitation practices are key contributing factors.

4.5 Socio-economic Distribution
Majority of patients were from lower middle class, highlighting the link between poor sanitation, overcrowding, and infection risk. Limited access to healthcare further exacerbates disease prevalence.

4.6 Dietary Habits
Predominance of mixed diet suggests that contaminated or improperly cooked food may be a major source of infection. Poor food hygiene and unsafe water consumption increase transmission risk.

4.7 Mizaj (Temperament) Distribution
Safravi temperament was most common, indicating higher susceptibility due to gastrointestinal heat and dryness. This supports Unani concepts linking humoral imbalance with digestive disorders.

4.8 Balghami Temperament
Balghami individuals showed moderate prevalence, with cold and moist qualities promoting parasitic growth. Weak digestion and mucosal accumulation create a favorable environment for infestation.

4.9 Damvi Temperament
Damvi individuals had lower incidence due to strong immunity and balanced metabolism. However, poor hygiene and dietary excess can still predispose them to infection.

4.10 Saudavi Temperament
Least represented, Saudavi individuals are less prone due to dry intestinal conditions unfavorable for parasites. However, infections may be chronic due to reduced vitality.

4.11 Personal Habits
Most patients had no addictions, though tobacco and gutkha use were noted in some cases. These habits may indirectly contribute by impairing hygiene and gastrointestinal health.

4.12 Abdominal Pain (Comparative)
Both treatments significantly reduced abdominal pain, with Albendazole showing faster relief. Qurs-e-Deedan-e-Jadeed demonstrated gradual improvement with added digestive and humoral benefits.

4.13 Nausea (Comparative)
Albendazole provided complete and rapid relief, while Qurs-e-Deedan-e-Jadeed showed moderate but significant improvement. The Unani formulation also enhanced digestion and systemic balance.

4.14 Anal Itching (Comparative)
Both groups showed complete resolution of anal itching, indicating strong anthelmintic efficacy. Qurs-e-Deedan-e-Jadeed additionally offered detoxification and humoral correction benefits.

4.15 AEC (Eosinophil Count) Reduction
Both treatments significantly reduced AEC, confirming effective parasite control. Albendazole showed slightly greater reduction, while the Unani drug provided holistic systemic improvement.

5. Conclusion:

The present study compared the efficacy of Qurs-e-deedan e jadeed, a traditional Unani formulation, with Albendazole in the treatment of Ascaris lumbricoides infection in 40 patients. Both treatments were effective in alleviating clinical symptoms and reducing parasitic load. Albendazole demonstrated complete relief in all patients (100%), while Qurs-e-deedan e jadeed achieved full relief in 70% of patients and partial relief in 30%. Objective stool examination and ova count analysis supported these findings, showing higher parasitic clearance with Albendazole but significant improvement with Qurs-e-deedan e jadeed. Qurs-e-deedan e jadeed effectively reduced abdominal pain, nausea, vomiting, and anal itching, indicating its potential as a safe and effective alternative or complementary therapy in mild to moderate ascariasis. No adverse effects were observed during the study period,

highlighting its safety profile. Although the study provides encouraging results, limitations such as small sample size, short follow-up duration, and reliance on subjective symptom assessment must be considered. Overall, the study suggests that Qurs-e-deedan e jadeed is a promising therapeutic option, while Albendazole remains the highly effective standard treatment. Future large-scale, controlled trials with longer follow-up are recommended to confirm the long-term efficacy of Qurs-e-deedan e jadeed and its role in the management of ascariasis.

REFERENCES

[1] Bethony J, Brooker S, Albonico M, Geiger SM, Loukas A, Diemert D, et al. Soil-transmitted helminth infections: ascariasis, trichuriasis, and hookworm. Lancet. 2006;367(9521):1521–32.
[2] WHO. Soil-transmitted helminth infections [Internet]. World Health Organization; 2023 [cited 2025 Sep 14]
[3] Dold C, Holland CV. Ascaris and ascariasis. Microbes Infect. 2011;13(7):632–7.
[4] Kabeeruddin HM. Tarjuma wa Sharah Kulliyat-e-Qanoon. New Delhi: CCRUM; 1957. p. 562–70.
[5] Ibn Sina. Al-Qanun fi'l-Tibb (The Canon of Medicine). New Delhi: Idara Kitab-us-Shifa; 2010. p. 295–300.
[6] Razi ABM. Kitab al-Hawi fi'l-Tibb (The Comprehensive Book on Medicine). Hyderabad: Dairatul Ma'arif al-Osmania; 1967. Vol 10, p. 112–8.
[7] Jurjani I. Zakhira Khwarzam Shahi. New Delhi: Idara Kitab-us-Shifa; 2010. Vol 2, p. 410–5.
[8] Baghdadi IH. Kitab al-Mukhtarat fi'l-Tibb. Lucknow: Munshi Naval Kishore Press; 1908. Vol 2, p. 233–8.
[9] Nadim M, Ansari S. Worm infestations in Unani medicine: classical concepts and current relevance. Hippocratic Journal of Unani Medicine. 2015;10(2):23–31.
[10] Ahmad S, Jafri SA. Anthelmintic resistance and the potential of traditional medicine. Integr Med Res. 2021;10(3):100740.
[11] Razi ABM. Kitab al-Hawi fi'l-Tibb. Hyderabad: Dairatul Ma'arif al-Osmania; 1967. Vol 10, p. 112–25.
[12] Ibn Sina. Al-Qanun fi'l-Tibb. New Delhi: Idara Kitab-us-Shifa; 2010. p. 295–310