



Case Study

Clinical Efficacy of Safoof-e-Teen in Acute Diarrhea (Is'Haal-e-Haad) – A Case Study

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ABSTRACT

Objective: In unani system of medicine, acute diarrhea is mostly considered as Is'haal-e-Safravi (bilious diarrhea) which is caused by Insebaab-e-Safra (infiltration of bile) into stomach and intestine. Safoof-e-Teen is a herbomineral Unani pharmacopeal formulation which is claimed that it stops bilious and bloody diarrhea rapidly. The aim of this paper is to evaluate the efficacy of Safoof-e-Teen in a patient with acute diarrhea.

Case Study: A 2 years old child having acute diarrhea, visited to Govt. Unani Dispensary, Bheemganj Mandi, Kota, Rajasthan, India, for treatment. He suffered from yellowish, watery stool at every half hour approximately 25-30 times in a day since last 45 days. He was treated with Safoof-e-Teen 3 gm. in the form of zulal (infusion) with plane water twice a day on empty stomach orally for 5 days.

Result: Stool passed out after 4 hours with semisolid in consistency and Frequency of passing stool was reduced as 10-15 times in 1st day. Frequency of passing stool was further reduced as 7, 5, 3 and 2 times in 2nd, 3rd, 4th, and 5th day of treatment respectively with solid in consistency of stool. Thus clinical improvement was excellent and significant

Conclusion: Saffof-e-Teen is safe and effective in the treatment of Diarrhea (Is'haal) as a potent anti-diarrheal drug.

KEY WORDS: Diarrhea, Is'haal, Safoof-e-Teen, Unani System of Medicine.

1. INTRODUCTION

Diarrhea (Is'haal) known as Zarb-o-Khifah, is the passage of liquid or watery stool more than three times a day.¹⁻² Acute diarrhea (Is'haal-e-Haad) is defined as diarrhea of presumed infectious origins that begins acutely and lasts for 14 days or more. It is called persistent diarrhea also.²

In India, rotavirus and enterotoxigenic E. coli account for nearly half the total acute diarrheal episodes as causative agents among children. Apart from enterotoxin producing E. coli (ETEC) which account for nearly 20 % of childhood diarrheas. Other forms of diarrheagenic E. coli are enteroinvasive (EIEC), enterohemorrhagic (EHEC), attaching effacing E. coli or localized adherent (LA-EC), diffusely adherent E. coli (DA-EC), and aggregative

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adherent *E. coli* (Agg-EC). *Shigella* and *Salmonella* species are isolated in 3-7 % of childhood diarrheas. The other bacterial agents causing diarrhea include *Campylobacter jejuni*, *Yersinia enterocolitica* and *Aeromonas hydrophilia*. *Giardia lamblia* rarely causes acute diarrhea.²

In unani system of medicine acute diarrhea mostly considered as *Is'haal-e-Safravi* (bilious diarrhea) caused by *Insebaab-e-Safra* (infiltration of bile) into stomach and intestine and as *Zalaq-ul-Medah* caused by *warm-e-haar* (acute inflammation); may be *safravi* (bilious) or *damvi* (bloody), *samoom-e-harrah* (hot toxins) of stomach and *Insebaab-e-khilt-e-akkaal* (infiltration of corrosive humor) into stomach.^{1,3-4}

The two main risks of diarrhea are malnutrition and death. Dehydration is the most common cause of death due to diarrhea. A significant number of deaths occur as a result of malnutrition consequent to a series of diarrhea. Significant dehydration disturbing the balance of electrolytes and acid-base status of the body occurs in about 2-5 % of all cases of diarrhea.²

In Unani System of Medicine, *Is'haal* (diarrhea) is treated with the drugs having their pharmacological properties as *Qabiz* (astringent), *Habis* (styptic).³⁻⁴

2. CASE STUDY

A 2 years old child having diarrhea, visited to Govt. Unani Dispensary, Bheemganj Mandi, Kota, Rajasthan, India, for treatment. He suffered from yellowish, watery stool at every half hour approximately 25-30 times in a day since last 45 days. During this period 2 upper and 2 lower incisor teeth have erupted and reduced 2 kg of body weight. The diagnosis was *Is'haal-e-Safravi* (bilious diarrhea) as per Unani concept while according to recent concept it was acute diarrhea, already established by stool examination as culture and finding showed as microorganism *E. coli* positive. Before coming under my study Patient has been treated through modern medicine by antibiotics, binding agents, anti-motility agents and anti-secretory agents but he has got no relief in frequency and consistency of stool. However vitals were normal and no sign of dehydration due to regular intravenous fluid therapy has been taken.

Safoof-e-Teen is a herbomineral Unani pharmacopeal formulation and prepared according to *Bayaz-e-Kabeer* Volume-2 in Ayurved Rasayan Shala Ajmer Rajasthan, supplied to the Govt. Dispensary kota, Rajasthan. It is claimed that it stops bilious and bloody diarrhea rapidly.⁵ Keeping this fact an attempt has been made to evaluate the clinical significance of this drug in a case of acute diarrhea (*Is'haal-e-Haad*). Its ingredients are as follows;

Unani Name	Scientific Name	Parts Used
Bazr-e-Qatoona (Ispgol)	<i>Plantago ovata</i> Forsk	Seeds
Tukhm-e-Reehan	<i>Ocimum sanctum</i> Linn.	Seeds
Tukhm-e-Hammaz	<i>Rumex vesicarius</i> Linn.	Seeds
Nashastah	<i>Triticum aestivum</i> Linn.	Seeds

Samag-e-Arabi	Acacia Arabica Lam.	Gums
Gil-e-Armani	Armenian bole	Crystals
Tabasheer	<i>Bambusa arundinacea</i> Retz.	Crystals

Ingredients of *Safoof-e-Teen*⁵⁻⁶

The patient has been prescribed to take 3 gm. *Safoof-e-Teen* in the form of zulal (infusion) with plane water twice a day on empty stomach orally. No concomitant therapy was allowed during treatment.

3. RESULTS AND DISCUSSION

After given the 1st dose of *Safoof-e-Teen* to the patient, stool passed out after 4 hours with semisolid in consistency and Frequency of passing stool was reduced as 10-15 times in 1st day. Frequency of passing stool was further reduced as 7, 5, 3 and 2 times in 2nd, 3rd, 4th, and 5th day of treatment respectively with solid in consistency of stool. On the basis of these observations it is resulted that *Safoof-e-Teen* markedly reduced the volume and frequency of stool in diarrhea during study. Thus clinical improvement was excellent and significant. *Safoof-e-Teen* was found to be safe and effective. The beneficial actions of *Safoof-e-Teen* can be attributed to the presence of complex spectrum of actions including *Qabiz* (astringent), *Habis* (styptic), *Mujaffif* (ciccative) and *Musakkin* (sedative) activities in its ingredients through increase intestinal absorption and reduce intestinal movement.

Safoof-e-Teen is commonly used in bilious and bloody diarrhea as *Qabiz* (astringent), *Habis* (styptic) activities. *Bazr-e-Qatoona* (*Plantago ovata*Forsk seeds) has been used in diarrhea (*Is'haal*) as *Qabiz* (astringent) and *Musakkin* (sedative) activities.^{7,8,9} It is investigated the *Pysilium* seeds contain over 30% of hydrocolloidal polysaccharide (mucilage) in the outerseed coat which has powerful ability to retain water and it absorbs excess liquid in the intestines and helps to add bulk to the stool.¹⁰

Tukhm-e-Reehan (*Ocimum sanctum* Linn. seeds) may effective in acute diarrhea against *E. coli* by its *Dafeey-e-Ta'affun* (antiseptic) activity.⁷ It may helpful to retain cardiac function via its *muqawwi-e-qalb* (cardioprotective) activity, to avoid complication of dehydration, in which cardiac output becomes very low.^{2,7}

Tukhm-e-Hammaz (*Rumex vesicarius* seeds) possess *Qabiz* (astringent) and *Musakkin* (sedative) activities, can be mediated to the presence of alkaloids, flavonoids, triterpenoids carbohydrates, tannins, phenols, gums and mucilage. Although the antidiarrhoeal properties of the reported active terpenoids are well established. Sesquiterpenes, diterpenes, terpenes, flavonoids and terpenoid derivatives are known for inhibiting release of autocoids and prostaglandins, thereby inhibit the motility and secretion.^{7,11}

Samag-e-Arabi (*Acacia arabica*Lam. gums) is useful in diarrhea as *Qabiz* (astringent) and *Habis* (styptic) properties. It is revealed that Gums contain galactose, L-rhamnose, L-

arabinose and aldobiouronic acids, which may play a role in Qabiz (astringent) and Habis (styptic) actions.^{7,12} Gil-e-Armani (Armenian bole) has been used in diarrhea as habis (styptic) and mujaffif (ciccative) properties.⁷ Tabasheer (Bambusa Arundinacea) has proposed qabiz (astringent) and mujaffif (ciccative) activities.⁷ It is demonstrated that Tabasheer, a siliceous secretion contains silicate (SiO₂) up to 90.56%, used to check diarrhea.¹³ Nashastah (Triticumaestivum Linn.) is indicated in diarrhea and biliaryness as antidiarrheal and anti-biliaryness activity.¹⁴

4. CONCLUSION

It is concluded that Safoof-e-Teen is safe and effective in the treatment of Diarrhea (Is'haal) as a potent anti-diarrheal drug. Further studies of large sample size in this direction are needed to understand the better efficacy and to explain the mechanism of action of Saffof-e-Teen in Diarrhea (Is'haal).

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