# **Case Report**

DOI: https://dx.doi.org/10.18203/2394-6040.ijcmph20251401

# A case of non-alcoholic steatohepatitis solved by unani formulations (Qurs-e-Zarishk, Arq mako and Arq Kasni)

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Received: 12 January 2025 Accepted: 26 March 2025

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#### **ABSTRACT**

Non-alcoholic steatohepatitis is defined as the fat buildup of greater than 5 percent together with the histologic indications of necro-inflammation and hepatocyte ballooning and degeneration. A 60-year-old female patient was diagnosed with Non-alcoholic steatohepatitis on 27/2/2024. She was stable without any symptoms until she developed abdominal discomfort and approached the OPD, department of Moalajat, RRIUM, Srinagar. She was a diagnosed case of NASH, which was confirmed with the help of fibro scan. The regression of NASH, may have been due to anti-inflammatory, hepatoprotective, antioxidant, hypolipidemic, hypoglycemic effects of the drugs given to the patient. In addition to this, the drugs also possess liver strengthening, demulcent and diuretic effects which add more to their healing effects.

**Keywords:** Non-alcoholic steatohepatitis, Qurs-e-Zarishk, Arq mako, Arq kasni

#### INTRODUCTION

Non-alcoholic steatohepatitis is defined as the fat buildup of greater than 5 percent together with the histologic indications of necro-inflammation and hepatocyte ballooning degeneration.1 Non-alcoholic and steatohepatitis can be either primary or secondary. Primary NASH also known as typical NASH is associated with central obesity and often type-2 diabetes mellitus, but without a specific additional cause. Secondary NASH is associated with a specific, nonalcohol-related problem, drug or toxin induced causes.<sup>2</sup> In Unani System of medicine, based on the signs and symptoms of NASH, it can be studied under the concepts of warm-e-kabid balghami (phlegmatic hepatitis) and sui-mizaj kabid barid (altered cold temperament of liver).In Sū-i-mizaj kabid barid the mizaj of liver is changed from hot and moist to the barid due to the eratic food habits and consumption of fatty foods. This condition causes the impairment of quwwati jadhiba and quwwati hadima leading to the signs and symptoms of the disease.<sup>3</sup> Also the disease can be related to the waram-al-kabid balghami which is an inflammatory condition that affects the liver, potentially leading to the swelling of liver tissue, if this condition is left untreated it transforms into the complicated form which can be correlated to NASH.<sup>4</sup>

## **CASE REPORT**

A diagnosed case of NASH was taken for the study from OPD, department of Moalajat, Regional Research Institute of Unani Medicine, Habak, Srinagar, Kashmir 190006. The case was a 60-year-old female patient, diabetic, hypertensive and euthyroidic who came to the OPD of RRIUM Srinagar, with pain in her right hypochondrium, which was gradual in onset, dull in character, mild to moderate in severity, non-radiating and associated with fatigue. The patient was already a diagnosed case of NASH, when she approached in OPD, for alternative options of treatment. She was a known case of type-2 diabetes for the past 18 years, was on oral hypoglycemic drugs for last 17 years and she was started

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on insulin from one year. In addition to this, patient was also a known case of hypertension, was put on ARB's (Telmisartan 40 mg) from last 10 years. She had also undergone cholecystectomy 5 years back, tubectomy 30 years back. Family history for NASH was non-significant, patient had no history of alcohol consumption or smoking. She was in her menopause with obstetrical history as G3P3A0. Her appetite was significantly reduced, sleep and bowl were normal.

On General Examination, she was obese with a weight of 85 kg and height 5 feet with BMI 36.6 kg/m2. All the vitals were normal (BP= 130\80 mmHg, pulse=74 bpm, respiratory rate=16/min and temp=98f). No lymphadenopathy, cyanosis, edema, jaundice or anemia could be seen. On systemic examination, patient was alert, conscious and well oriented with time, person and place. S1, S2 clearly heard, respiratory sounds were normal. On evaluation of Gastrointestinal system, right hypochondrium was slightly swollen and tender and she had mild abdominal distension.

### Duration of study

The duration of study was 3 months. Total of six follow ups were done, each after the duration 15 days.

#### Consent

The patient was willing to be the part of our study and informed consent was taken prior to the start of intervention.

#### Intervention

#### Life style modification

Following lifestyle modifications were advised to the patient. The patient was strictly advised to avoid sedentary life style. Light to moderate type of exercises which were explained to the patient were included in the daily routine. A brisk walk of 10 min daily was also advised to the patient.

#### Dietary changes

Following dietary changes were practiced. Reducing the number of calories in the diet through the practice of portion control. Eating healthy diet that was rich in fruits and vegetables, whole grains and low in saturated fats. Patient was advised to limit animal-based foods like red meat. Patient was also suggested to limit the amount of salt and sugar in her diet. Use of limited quantity of oils for meal preparation was also advised.

# Drugs

Qurs-e- zarishk, mentioned in one of the renowned Unani texts, consisting of following ingredients was given in the dose of 500 mg two times a day after lunch and dinner

along with water.<sup>5</sup> Arq make and Arq kasni with ingredients mentioned in Table 2, were also given in the dose of 20 ml each along with Qurs-e-Zarishk at the same time.<sup>5</sup>

#### Assessment

The patient was assessed with the help of Fibroscan before and after the study and various Scales such as Hunger Scale, Fatigue Assessment Scale and Visual Analog Scale, were used to assess the signs and symptoms of the disease fortnightly i.e., on every follow up.



Figure 1: Fibroscan report.

A significant change can be seen in the fibro scan before and after the intervention, which is clearly evident from the below reports of fibro scan.

Also, improvements in the signs and symptoms of disease have been seen like improvement in appetite, fatigue and pain which was evaluated with the help of following scales.

In addition to this, the medications given to the patient proved to be helpful in reducing the weight which is considered as an important step in the management of NASH. Weight of the patient was reduced from 85 kg at baseline to 77 kg in the 6th follow-up. Further post follow ups were done after every two weeks and patient was advised not to discontinue the medication.

Table 1: Ingredients of Qurs-e-Zarishk.

Name	Scientific name	Dosage
Zarishk	Berberis aristata	40 g
Rewand Chini	Rheum officinale	10 g
Gul-e-surkh	Rosa damascenea	10 g
Maghz-eTukhm- e-Khiyarain	Cucumis sativus	10 g
Sandal Safaid	Santalum abum	10 g
Tukhm-e-Kasni	Cichorium intybus	10 g
Luk Maghsool	Cocus lacca	5 g
Asl-us-soos	Glycyrrhiza glabra	5 g
Gul-e-Nilofar	Nymphaea nouchali	5 g
Tabasheer	Bambusa bambos	5 g

Table 2: Ingredients of Arq-e-Kasni.

Name	Scientific name	Dosage
Kasni	Cichorium intybus	250 g
Aab	Water	51

Table 3: Ingredients of Arq-e-Mako.

Name	Scientific name	Dosage
Mako	Solanum nigrum	1 part
Aab	Water	20 parts

Table 4: Assessment of NASH on basis of below mentioned scales.

	Visual Analogue Scale	Fatigue assesment Scale	Hunger Scale
Baseline	5	5	7
1st follow-up	5	5	6
2nd follow-up	4	4	5
3rd follow-up	4	3	5
4th follow-up	3	3	4
5th followup	2	2	3
6th followup	0	2	3

#### **DISCUSSION**

As stated above, In Unani System of medicine NASH is studied under the concept of warm -e-kabid balghami and su-i-mizaj barid. The intervention that has been given to the patient correct the causes i.e warm-e-kabid and su-i-mizaj barid which if left untreated can transform into the NASH. In our case study there was a significant change in the fibroscan reports of the patient along with the improvement in signs and symptoms of disease.

improvements can be attributed to the pharmacological actions of the drugs used, such as muhallil-i-Awram (anti-inflammatory), mulattif (demulsant), muqaw-e-Kabid (liver tonic) and mudir-ebaul (diuretic) 5.As the root cause of this disease lies in the inflammation and derangement of mizaj of the liver and such actions of the drugs address these causes which ultimately helps in treating the disease, preventing the further progression and helping in the better prognosis of disease. In addition to this, the main ingredient of Qurs-e-Zarishk is berberis aristata which contains berberine (an isoquinoline alkaloid) as its principle constituent, due to its pharmacological activities like anti-oxidant6 and antiinflammatory (reduces the levels of hs-CRP, IL-6 and TNF-α), this reduction in anti-inflammatory factors particularly hs-CRP helps in the decrease of insulin resistance, triglycerides and total cholesterol.<sup>7</sup>

Thus, forming an important constituent in the treatment of metabolic syndrome, which is considered as one of the main etiological factors of Nash.<sup>8</sup> Also the other medications given to the patient were Arq-e-Mako and Arq-e-Kasni. Arq-e- Kasni with Cichorium intybus as its main ingredient possesses the biological activities like hepatoprotective, anti-inflammatory, antioxidant, hypolipidemic and anti-diabetic and Arq-e-Mako contains Solanum nigrum as main ingredient with solanine being a prominent constituent possesses antidiabetic and anti-inflammatory action.<sup>9,10</sup> Therefore, Qurs-e-zarishk along with Arq-e-Mako and Arq-e-Kasni possesses the wonderful activities that cure the cause of NASH.

# **CONCLUSION**

From the above-mentioned results and discussion, we can conclude that Unani system of medicine along with a modified life style and restricted diet plan plays a vital role in the management of chronic illness by addressing the root cause of disease and one such disease is the non-alcoholic steatohepatitis. Hence Unani system of medicine can also be used as option for the treatment of NASH and also to prevent its further progression and improve the prognosis. However, more advanced studies with robust methodology needs to be carried out.

Funding: No funding sources Conflict of interest: None declared Ethical approval: Not required

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Cite this article as: Hussain Z, Hamid S, Wani NN, Jalal B, Yaqoob F. A case of non-alcoholic steatohepatitis solved by unani formulations (Qurs-e-Zarishk, Arq mako and Arq Kasni). Int J Community Med Public Health 2025;12:2352-5.