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CONCEPT OF DU'F AL-MI'DA (FUNCTIONAL DYSPEPSIA) AND ITS MANAGEMENT THROUGH UNANI MEDICINE

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ABSTRACT

Du'f al-Mi'da (Functional dyspepsia-FD) is prevalent in 11-30 percent of people around the globe and FD always a matter of concern for physicians, in last couple of decades it emerged as a disease condition. It is mainly due to the change in the lifestyle and adoption of sedentary life style in town and cities of developing countries. It is complicated if not treated in time. Unani literature is very rich in controlling the health problems related to digestive system. The objective of this review paper is to compile all the information available in Unani system of medicine on Du'f al-Mi'da as well as the similar disease

condition in contemporary system of medicine. Libraries of council headquarters and regional institute were searched for disease description, causes, sign symptoms, investigation for diagnosis, treatment modalities and single and compound Unani formulations mentioned for its treatment. Here all the information is how case to give an insight view for the disease and its cheap cost effective and adverse effect free treatment to the community.

KEYWORDS: *Du'f al-Mi'da*, Functional dyspepsia, *Du'f al-Hazm*, Unani System of medicine.

INTRODUCTION

Du'f al-Mi'da (Functional dyspepsia-FD) has been noted for centuries but it emerged only over the past several decades. Approximately 11-30 percent of people around the globe have FD.^[1] Females, smokers and persons taking non-steroidal anti-inflammatory drugs (NSAIDs) are at higher at risk for developing FD.^[2] It is a commonest problem of medical science for which physicians spend a great deal of time and energy to treat these disorders carefully worldwide.^[3-4] Unani physicians have a firm belief that gastrointestinal (GI) system has a main role in health maintenance not only for a single organ but also for the whole body. Any

imbalance in humoral equilibrium may result in organ disorder and gastrointestinal system is not an exception.^[5] If it works properly, it will produce normal humors in a balanced status in quality and quantity, which formed balanced temperament in an individual (*Mizaj-e-Saleh*).^[6]

Clinical picture of another disease condition in unani medicine *Du'f al-Hadm* is very similar to *Du'f al-Mi'da* that's why many people have used *Du'f al-Hadm* synonymously with *Du'f al-Mi'da*. According to Unani system of medicine *Du'f al-Mi'da* is the condition where food retained in the stomach for a longer time. In this state the temperament and consistency of the food does not change as much as to accept the function of *Quwwat mughayyira* i.e. faculty which helps in the assimilation of food. [7] *Du'f al-Hadm* is a precursor of the *Du'f al-Mi'da* because in this condition *Quwawat-e-Mughayyara* has become weak. It helps in the assimilation of food. Some physicians have described this as a functional disorder of stomach and intestine with no structural deformity of the organs. Possibly it can be understood as delayed digestion due to weakness of stomach in which patient feels restless after having meals. [8] It is usually accompanied with belching and nausea. Some patients experience loss of appetite. This occurs due to the accumulation of waste materials in the stomach. Some patients may have increased appetite due to the increased gastric secretions. Few patients may have less affinity towards food which is usually psychogenic. [9]

According to philosophy of Unani medicine five faculties work in human stomach under the umbrella of *Quwwat-e-tabiya* viz. *Quwwat Jaziba* (absorptive power), *Quwwat Masika* (retentive power), *Quwwat Hazma* (digestive power), *Quwwat Dafia* (excretive power) and *Quwwat Mumayyeza* (power of selective absorption). Any change in (quality and quantity or both) in any of the faculty causes *Du'f al-Mi'da* (functional dyspepsia). In case of weakness of any faculty there may be accumulation of waste materials in stomach causes this condition. ^[9]

Dyspepsia is made of two Greek words dys mean bad or difficult pepsia mean digestion which together mean indigestion.^[10] Modern Medicine uses "functional dyspepsia" (FD) when no organic diseases are found in the patients with symptoms of dyspepsia through special exams and tests like upper abdominal endoscopy.^[11]

METHODOLOGY

The main objective of this review is to compile all information on *Du'f al-Mi'da* (functional dyspepsia) available in Unani classical literature. Information available on functional

dyspepsia in allopathic medicine. In present review Unani classical books available in libraries at CCRUM headquarters New Delhi and its Regional Institute Aligarh were searched for its philosophy, sign & symptoms, investogations, and treatment modalities. All the information on *Du'f al-Mi'da* (functional dyspepsia) available in Urdu, Persian, Arabic and text books of allopathic medicine and surgery were surveyed for better understanding the disease condition in Unani system of medicine and similar condition in allopathic system of medicine.

CAUSES

In allopathic medicine the cause of functional dyspepsia is unknown. In this regards various hypothesis explain this condition but none can be consistently associated with FD. According to Unani system of medicine Du'f al-Mi'da is described as all pathologies of stomach including:^[8,12-16]

- Su' Mizaj Mufrad and Su' Mizaj Mufrad Maddi. It means the temperament of stomach has deviated from it normalcy.
- Accumulation of morbid material: there is accumulation of morbid material in stomach,
 this is also happened due to the change in temperament.
- **Inflammation and ulcer in stomach**, its too due to the accumulation of morbid material and change in temperament.
- Accumulation of gas in stomach: the retention and accumulation of food materials in the stomach excess to it normal time causes the formation of gas, that lead to fullness and irritation in the stomach.
- Fasad-e-Ghiza: some time due to the above factors food item in the stomach got spoiled and putrefied.

According to the allopathic system: Excessive acid secretion, inflammation of the stomach or duodenum, food allergies, lifestyle and diet influences, psychological factors, medication side effects (from drugs such as non-steroidal anti-inflammatory drugs and aspirin), and Helicobacter pylori infection have all had their proponents.^[10-11]

Due to these pathologies the episode of frequent indigestion, habitual vomiting, chronic debilitating diseases can be developed in individual.^[11,17] The persistence of this disease condition for long duration in stomach, results in weakness of muscular fibers and thinness of its walls which leads to its insufficiency in digestion of food. *Du'f al-Mi'da* leads to

generalized weakness of body due to non absorption of normal humours and it may progress into lienteric diarrhoea and ascites.^[12,17,18]

CLINICAL FEATURE

Du'f al-Mi'da is mentioned as feeling of nausea and vomiting after taking meals, pain between shoulder blades, general emaciation, pale facies; sometimes with puffiness of face, pain after taking meals and relieved following vomiting or diarrhoea. [8-9,11-13] Anorexia and indigestion in absence of any other organic diseases is also suggestive of *Du'f al-Mi'da*. [6] Belching, hyper-peristalsis and heaviness of stomach, frequent hiccups. [13-14] Loss of appetite, heaviness in stomach while taking foods, flatulence are also present. [15]

In contemporary medicine, there is no term equivalent to *Du'f al-Mi'da*. However, the signs and symptoms of *Du'f al-Mi'da* match with the symptoms of Functional Dyspepsia. The most similar condition to FD is *Su' Mizaj Barid Ratab* (simple cold and moist) without excess humor. The signs and symptoms are relatively the same as what is mentioned in the Rome III criteria for FD i.e. Postprandial Fullness, Early Satiety, Upper Abdominal Pain Or Discomfort, Heartburn. The signs that are present in physical exam include weak digestion, and symptoms like postprandial fullness (may be equals to *Thiql al-Mi'da*) and abdominal discomfort (with some symptoms somewhat equals to *Nafkh al-Mi'da/Qaraqir al-Mi'da*) support this theory, despite the fact that all necessary criteria are not fulfilled. [16]

If the patient does not care about the symptoms and simple cold gastric Su' Mizaj (dyscrasia) without excess humor goes on, a new persistent condition called Su' Mizaj Mustahkam (tenacious dyscrasia) will appear. This situation produces two new entities as per Unani classical texts: Su' al-Hadm (dyspepsia) and Du'f al-Hadm (delayed digestion). These disorders have signs and symptoms which are similar to FD (Table 1). [3-4,13-14,20-21]

Table 1: Gastric disorders arising from Su' Mizaj-i-Mi'da (stomach dyscrasia).

Gastric ailment	Signs	Symptoms
		- Malodor stool
Su' al-Hadm	- Incomplete digestion	- Malodor (sour or bitter) smoky
(dyspepsia)	- Subcostal bulging	belching
		- heartburn
Du 'f al-Hadm	- Delayed food passage from	- Postprandial fullness
(delayed digestion)	stomach	- Malodor belching

Prolonged *Su'Mizaj-i-Mi'da* (stomach dyscrasia) will cause *Mizaj Mustahkam* and organ debility subsequently. Continuous *Su'Mizaj-i-Mi'da* (stomach dyscrasia) will result in weakness of GI system, and the digestion would be impaired. So, the resulting humors would be abnormal (*Ghayr Tabi'i*), and the whole body would be affected.^[13]

TYPES OF DYSPESIA

According to the sign, symptoms, cause and site it may be divided into two subgroups: (1) Postprandial distress syndrome (PDS) (2) epigastric pain syndrome (EPS). FD is a heterogeneous disorder, and it seems that psychosocial factors, gastrointestinal motor abnormalities, and altered visceral sensation contribute to the patho-physiology of functional dyspepsia. About 30–70% of the patients with functional dyspepsia experience delayed gastric emptying. Impaired accommodation to the food is another frequent finding in dyspeptic patients. Visceral hypersensitivity is more prominent in patients with functional dyspepsia compared to healthy individuals and dyspeptic patients with organic causes. Some patients with functional dyspepsia develop impaired gastric and intestinal reflexes. Impaired reflex relaxation in the antral region leads to antral hypersensitivity and antral overload, and it may be a reason for occurrence of dyspeptic symptoms. [10,17,22-23]

LABORATORY INVESTIGATIONS

FD or *Du'f al-Mi'da* is usually is diagnosed ruling out organic disease or a structural basis for symptoms, The decision of physician to decide how many investigations have to be required. Some basic investigation e.g. blood counts, electrolytes, fasting blood sugar, renal function tests and thyroid function tests gives a clue to exclude other functional disease. Testing for celiac disease and stool examination for occult blood or parasites may also be considered. *H. pylori* infection can be diagnosed by serology breathe or stool testing. The following tests give help in diagnosis:^[11,24]

- **Blood test for heamogram:** long term indigestion person may have low level of hemaogram.
- **Endoscopy:** If patient is not responding to the treatment and complaining continues symptoms related to the dyspepsia endoscopy of Upper Gastrointestinal tract may gives the guidelines in final diagnosis. During this procedure a biopsy can also be done to exclude the cancer of stomach.
- **Tests to diagnose** *H. pylori* **infection:** to exclude H. pylori, Urea breath test, stool antigen test can be done.

- Liver function test: Liver enzymes levels can also gives some clue regarding the FD or Du'f al-Mi'da.
- **X-rays:** X-ray images are taken of the esophagus, stomach, and small intestine.
- Abdominal ultrasound: we can see the detailed picture of the inside of abdomen on monitor.
- **Abdominal CT scan:** monitor the 3D image of the inside of abdomen by injecting a dye into the veins.

PRINCIPAL OF TREATMENT

Unani system of medicine is based on holistic and vitalistic concepts and popular among the common people of many Asian countries and it caters the health problems through its various treatment modalities e.g. *Ilaj bit Tadbeer* (Regimenal therapy), *Ilaj bil Ghiza* (Dieto-therapy), *Ilaj bil Dawa* (Pharmacotherapy) and *Ilaj bil Yad* (surgery). *Ilaj bil Tadbeer* and *Ilaj bil Ghiza* is an important component of treatment in which physician decides the medicine and life style modification with some special procedures. *Ilaj bil Ghiza*, modification in diet and Unani compound formulation showed a good result in a case of weight and dyslipidemia management. More than 80% of Unani single drugs are from herbal sources and very less from animal and mineral source. Unani drugs showed a good result in many disease conditions where allopathic system does not have a curable results or having adverse effect on the body. In cases of many chronic diseases e.g. CKD, Arthritis, filariasis, splenomegaly, chronic skin diseases, allopathic medicine gives a symptomatic relief and expensive e.g. transplant of organ and dialysis, which are not up to the reach of common people, while some Unani single drugs gives cost effective, good result without any adverse effect on the body. [27-33]

Regulation of dietary habits (time, amount, order, quality, and temperament of ingesting food or drink) is of great importance in this regard as it may be curative by itself. [16,23] The next step in line of treatment for *Su' Mizaj-i-Mi'da* (stomach dyscrasia) is to use a proper drug in different dosage forms. If excess humor is present with gastric dis-temperament, the practitioner should perform *Tanqiya* of stomach through a safe route. When prolonged or *Su' Mizaj-i Mustaqim* takes place and organ debility occurs subsequently, *Taqwiyat* of the stomach is the last stage of the treatment process. [6,34] There is a long list of single and compound Unani formulations mentioned in Unani classical literature and National

Formulary of Unani Medicine which having the action of *Muqawwi-e-mida* and used for *Du'f al-Hadm* and *Du'f al-Mi'da*.

Single Unani drugs

Some Unani classical books have been searched for single unani drugs having the action of *Muqawwi-e-mida* and uses for *Du'f al-Hadm* and *Du'f al-Mi'da*. Single drugs are arranged as below:^[35-37]

Aamla (Phyllanthus emblica Linn.), Abhal (Juniperus communis Linn.), Afsanteen (Artemisia absinthium Linn.), Aftimoon (Cuscuta epithymum), Anar tursh (Punica granatum Linn.), Anjdaan (Ferula foetida regel), Babchi (Psoralea corylifolia Linn.), Babuna (Matricaria chamomilla Linn.), Badaward (Cirsium tuberosum (L.) All.), Badiyaan (Foeniculum vulgare Mill.), Bailgiri (Aegle marmelos Correa ex Roxb.), Baleela (Terminalia bellirica (Gaertn.) Roxb.), Balsan (Commiphora opobalsamum), Baokhamba (Careya arborea Roxb.), Barg Jhao (Tamarix articulata Vahl.), Bekh kibr (Capparis spinosa Linn.), Bora Armani (Armenian bole), Bundaq hindi (Sapindus trifoliatus Linn.), Charaita (Swertia chirayita (Roxb. ex Flem.) Karst.), Daarchini (Cinnamomum zeylanicum Blume), Daar filfil (Piper longum Linn.), Darunaj agrabi (Dornoicum hookeri), Doogo (Peucedanum graveolens C. B. Clarke), Falsa (Grewia asiatica Linn.), Filfil siyah (Piper nigrum Linn.), Ghafis (Gentiana dahurica Fisch.), Gilo neem (Tinospora cordifolia Miers), Gul Mehndi (Lawsonia inermis Linn.), Gul surkh (Rosa damascena Mill.), Habb-ul-Aas (Myrtus communis Linn.), Habb-ul Malook (Prunus cerasus Linn.), Haleela (Terminalia chebula Retz.), Heel kalan (Amomum subulatum Roxb.), Heel khurd (Elettaria cardamomum (Linn.) Maton), Hulba (Trigonella foenum-graecum Linn.), Izkhar makki (Cymbopogon Jawarancusa (Jones) Schult.), Jaiphal (Myristica fragrans Houtt.), Jamun (Syzygium cuminii (Linn.) Skeels), Jawa Akhar (salt derived from the ashes of Hordeum vulgare Linn.), Juntiyana roomi (Gentiana lutea Linn), Kabab chini (Piper cubeba Linn. f.), Kabab khandan (Zanthoxylum armatum DC.), Kachnaal (Bauhinia variegata Linn.), Kafoor (Cinnamomum camphora (Linn.) J. Presl), Kahu (Lactuca sativa Linn.), Kakronda (Carissa carandas), Kakra singhi (Rhus succedanea Linn.), Kanoocha (Phyllanthus maderaspatensis Linn.), Kareela (Momordica charantia Linn.), Kasni (Cichorium intybus Linn.), Kasoos (Cuscuta reflexa Roxb.), Kazmazaj (Tamarix orientalis Vahl), Khabsul hadeed (Ferric Oxide/ Iron Rust), Kharwazgona (Achyranthes aspera), Kharnoob nabti (Ceratonia siliqua), Khas (Lactuca serriola Linn.), Khulanjan (Alpinia galangal (Linn.)Willd.), Kishneez (Coriandrum sativum Linn.), Kuchla (Strychnos nuxvomica Linn.), Kuharba shamai (Vateria indica), Kutki (Picrorhiza kurroa), Lemon (Citrus limon (Linn.) Burm.f.), Lisan-ul Hamal (Plantago lanceolata Linn.), Laadan (Cisttus creticus Linn.), Lobaan (Styrax benzoin Dry.), Madar (Calotropis gigantea (Linn.) Ait. f.), Malkangni (Celastrus paniculatus Willd.), Marwareed (Pearl), Mastagi (Pistacia lentiscus Linn.), Meda lakdi (Litchi chinensis Sonn.), Mur makki (Commiphora myrrha), Naranj (Citrus medica Linn.), Nagesar (Mesua ferrea Linn.), Nakchikni (Centipeda minima (Linn.) A. Br.), Ood garqi (Aquilaria malaccensis Lam.), Oont katara (Echinops echinatus DC.), Paan (Piper betle Linn.), Piyaranga (Thalictrum foliolosum DC.), Pokharmol (Inula racemosa Hook.), Post bairon pista (Pistacia vera Linn.), Pudina (Mentha arvensis Linn.), Qaranphal (Syzygium aromaticum (Linn.) Merr. & L.M. Perry), Qinnab (Cannabis sativa Linn.), Qust (Saussurea hypoleuca Spreng.), Rasaut (Berberis aristata DC.), Reward chini (Rheum officinale Baill.), Saad koofi (Cyperus scariosus R. Br.), Safarjal (Cydonia oblonga), Salajit (Storax/Black Bitumen/Asphalt), Sammulfar (Arsenic oxide), Sandal safaid (Santalum album Linn.), Sandal surkh (Pterocarpus santalinus Linn. f.), Sang basri (Calamite/ Smithsonite/ Zinc carbonate), Sangdana murgh (Gizzard of hen), Sazaj hindi (Cinnamomum tamala Nees), Seer (Allium sativum), Shahad (Honey), Shahtra (Fumaria indica Pugsley), Shibt (Anethum sowa Roxb. ex Flem.), Sibr zard (Aloe barbadensis Mill.), Siras (Albizia lebbeck (Linn.) Benth.), Shooneez (Nigella sativa Linn.), Sumaaq (Rhus coriaria Linn.), Sumbultteeb (Nardostachys Jatamansi (D.Don) DC.), Shukayi (Onopordum nervosum), Tabasheer (Bambusa arundinacea (Retz.) Roxb.), Taj Qalmi (Cinnamomum aromaticum), Tila (Gold), Toodri (Matthiola incana (Linn.) R. Br.), Tukhm-e-Hayaat (Withania coagulans Dun.), Tukhm Hummaz (Rumex hydrolapathicum), Tukhm Qurtum (Carthamus tinctorius Linn.), Turanj (Citrus medica Linn.), Turanjbeen (Alhagi maurorum Baker Dexy), Ushna (Parmelia perlata (Huds.) Ach.), Ustukhuddus (Lavandula stoechas Linn.), Yashab (Agate), Zaranbad (Zingiber zerumbet Rosc ex Smith), Zarnab (Abies spectabilis (D. Don), Zarishk (Berberis aristata DC.), Zeera (Cuminum cyminum Linn.).

Compound formulations

Compound formulation mentioned in national formulary of Unani medicine. The formulations are as: Habb Halteet, Habb Kabid Naushadri, Habb Papita Desi, Habb Papita Vilaiti, Qurs Tabasheer Qabiz, Qurs Tutiya Kabir, Anushdaru Luluvi, Dawaul Misk Moatadil Jawaharwali, Itrifal Kishnizi, Jawarish Amala Sada, Jawarish Anarein, Jawarish Bisbasa, Jawarish Jalinoos, Jawarish Mastagi, Jawarish Ood Shireen, Jawarish Ood Tursh, Jawarish

Safarjali Qabiz, Jawarish Shaharyaaran, Jawarish Tamar Hindi, Jawarish Utraj, Jawarish Zanjabeel, Jawarish Zarishk, Majoon Antaki, Majoon Fanjnoosh, Majoon Jalali, Majoon Muluki, Majoon Sangdana Murgh, Murabba Aamla, Murabba Behi, Murabba Haleela, Gulgand Gulab, Roughan Heel Khurd, Roughan Qaranfal, Sikanjabeen Leemuni, Safoof Chutki, Safoof Habb Rumman, Safoof Nana, Safoof Oaranfal, [38] Habb Ruman, Majoon Bugrat, Majoon Peetha Paak, Majoon Sandal, Jawarish Aamla Ambari, Jawarish Aamla Luluvi, Jawarish Daarchini, Jawarish Darchini Qawi, Jawarish Kafoor, Jawarish Khilfa, Jawarish Tabasheer Qabiz, Itrifal Khabsul Hadeed, Dawaul Kibreet, Dawa Tatoora, [39] Habb Chai Khatai, Habb Mastagi, Habb Sumaq, Kushta Faulad Sard, [40] Jawarish Buqrat, Jawarish Javed, Jawarish Tabasheer, Jawarish Ood Kibreet, Jawarish Muqawwi Meda, Jawarish Kafoor Qawi, Jawarish Khuzi, Safoof Habb-e-Inam, Safoof-e-Ood, Safoof Kuharba, Safoof Maleeh, Safoof Waj, [41] Habb-E-Sumaq, Qurs Halteet, Qurs Malti Basant, Qurs Pudina Qurs Tinkar, Kushta Khabsul Hadeed, Kushta Mirgang, Kushta Tamesar, Dawaul Misk Barid Jawahar Wali, Dawaul Misk Motadil Jawahar Wali, Jawarish Aamla Sada, Jawarish Ood Shireen, Jawarish Pudina Vilayti, Jawarish Safarjali Mushily, Jawarish Tamar Hindi, Jawarish Zaruni Ambary, Majoon Chobchini Ba Nuskha Kalan, Majoon Dabidul Ward, Majoon Khabsul Hadeed, Majoon Mugawwi Meda, Majoon Zanjabeel, Mufarreh Azam, Arq Biranjasif, Arq Ilaichi, Arq Maa ul Laham Mako Kasni Wala, Arq Nana, Arq Zeera, Sharbat Belgiri, Ikserul Atfal, Maalti Basant, [42] Hazoomi, Qurs Zaheer, Yashbi, Jawarish Aamla Luluvi, Jawarish Muqawwi Meda, Safoof Tabasheer Murakkab, Sharbat-e-Faulad. [43]

CONCLUSION

Du'f al-Mi'da (Functional dyspepsia) is a commonest cause of dyspeptic symptoms. Generally it refers to a heterogeneous group of symptoms in upper gastrointestinal system. The development of pharmacotherapeutic treatment in allopathic system for FD is challenging due to its heterogeneous group of symptoms even the population is very large. Unani system of medicine is an oldest system of medicine, which caters the health problems of chronic disease through its various treatment modalities and rich source of single and compound formulations. In FD a major cause of functional dyspepsia is infection of *H. pylori*. Earlier in clinical trials a non pharmacopeial Unani formulation comprising of four single Unani drugs i.e. Asl-us-soos (Glycyrrhiza glabra), Aspaghol musallam (Plantago ovate), Samgh e arabi (Acacia Arabica) and Mastagi (Pistacia lentsicus) in a combination of 1:2:2:1 ratio showed a significant results in treating antral gastritis and eradicating *H. pylori* bacteria. [44-45] In earlier study apart from these single Unani drugs many more single and

compound Unani drugs are very part of the treasure of Unani pharmacopeia which might be tested for *Du'f al-Mi'da* (Functional dyspepsia) to provide better health care to the ailing society.

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