

Non-Alcoholic Fatty Liver Disease and Related Diseases from the Theory of Visceral Outward Manifestation

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Abstract: The theory of the Tibetan elephant plays an extremely important role in traditional Chinese medicine, and it explains the physiopathology of diseases under the theory of Yin and Yang and the five elements. Under the guidance of Tibetan elephant theory, this paper discusses the relationship between liver and heart, spleen, lung, kidney in detail, and expounds the connection between NAFLD and NAFLD, so as to play the advantages of TCM Tibetan elephant theory, provide ideas for the treatment of NAFLD and related diseases, and provide references for patients' diet and living habits.

Keywords: theory of visceral outward manifestation; nonalcoholic fatty liver disease; related diseases; five elements

1. Introduction

Nonalcoholic fatty liver disease (NAFLD) is a syndrome in which steatosis of hepatocytes is the main pathological manifestation, excluding alcohol and other definite liver-damaging factors, and is a relatively common metabolic system disease in China^[1]. With the rise in the standard of living of the general public and changes in dietary habits, the number of patients with NAFLD is increasing, and the prevalence of NAFLD is 25% to 30% worldwide^[2]. NAFLD as a multisystem metabolic disease, its disease effects not only cause liver disease disability and death in patients, but also are important factors in triggering cardiovascular disease, obstructive sleep apnea, hematological problems, extrahepatic tumors, endocrine disease, chronic kidney disease and skeletal muscle and other related diseases^[3]. As the largest digestive organ and gland in the body, the liver plays a key role in the metabolic process of the body due to its complex physiological functions. Therefore, when NAFLD occurs, damage to liver function can cause disorders in several organ tissues and systems of the body. However, there is no definite conclusion on the pathogenesis of NAFLD, and most scholars agree that it is the result of a combination of genetic, environmental, dietary, and metabolic factors.

NAFLD does not have an identical name in Chinese traditional medicine, but it always belongs to the category of liver disease, involving the spleen and kidney, etc. According to the literature of Chinese doctors, this disease can be classified into the categories of "accumulation", "liver strain", "phlegm turbidity", "hypochondriacal pain", "gangrene" and "fullness" in Chinese medicine^[4]. The "Expert Consensus on the Treatment of Non-Alcoholic Fatty Liver Disease in Chinese Medicine" points out that the main etiology and causes of NAFLD are poor diet, emotional and mental disorders, overwork, physical weakness, and chronic disease^[5]. In Chinese medicine, NAFLD is thought to be caused by phlegm-dampness, phlegm turbidity, loss of drainage in the liver, loss of health and movement in the spleen, loss of qi in the kidneys, and lack of proper transformation of qi, blood, and fluids, resulting in phlegm-dampness, heat, and stagnation in the liver^[6].

"Su Wen - Yu Ji Zhen Zang Lun", "The liver receives qi from the heart, transmits it to the spleen, and the qi is shed to the kidneys, to the lungs and death." Chinese medicine believes that the organism is centered on the five organs, and that the liver interacts with the spleen, heart, lungs, and kidneys to influence and interact with each other. The author discusses the complications caused by NAFLD in terms of the physiological functions of the liver and the relationship between the liver and the five

viscera and six internal organs based on the theory of Tibetan elephants in Chinese medicine, aiming to provide new ideas for the study of the pathogenesis and treatment of NAFLD, and to enrich the understanding of liver diseases in Chinese medicine and the theory between the liver and the spleen, heart, lung and kidney. To provide a combination of Chinese and Western medicine ideas and more treatment options for the treatment and prognosis of NAFLD, and to slow down the progression of the disease in order to alleviate patients' pain more quickly and accurately and to enable them to recover as soon as possible.

2. The Tibetan Elephant Doctrine

Zangxiang, also known as "tibetan elephant". The word "zangxiang" was first used in "Suwen - Six Sections on Zangxiang". According to Sun^[7], "the doctrine of Tibetan and Elephant is a doctrine based on the study of the morphological structure, physiological activities and interrelationships of the organs and tissues of the human body; Tibetan - refers to the organs and tissues hidden inside the human body, that is, the internal organs; Elephant - refers to the morphological structure of the organs and tissues of the organs and the physiological functions and activities of the organs and Tibetan image refers to the physiological functional activities and pathological changes of the internal organs in the human body reflected in the external signs." Liver (wood) - Heart (fire) - Spleen (earth) - Lung (gold) - Kidney (water), the five organs in this order, in order to produce each other; the interposition of grams: liver (wood) - spleen (earth) - kidney (water) - heart (fire) - lung (gold) - liver (wood), according to this order of grams control. The interplay between the five organs allows the organs to function properly, and the five organs interact with each other, thus forming a complete organic life form.

"Su Wen - Tibetan Elephant" cloud: "Liver, in the sound for the angle, in the will for anger; heart, in the sound for the symbol, in the will for joy; spleen, in the sound for the Gong, in the will for thought; lung, in the sound for the Shang, in the will for worry; kidney, in the sound for the feather, in the will for fear." "Suwen - Six Sections of Zangxiang" cloud: "liver, strike the pole of the original, the soul of the residence also This is the less Yang of Yang, through the spring qi." "Suwen - Linglan Secret Discourse": "The liver is the official of the general, and it is out of the mind." The main physiological functions of the liver are to regulate the mind and emotions: the heart is the master of emotions and activities, but it is also closely related to the drainage function of the liver. Maintaining the movement of qi and blood: blood movement and fluid transmission and metabolism depend on the movement of qi in and out. Promoting the movement of the Spleen and Stomach: Promoting the movement of the Spleen and Stomach to secrete bile to aid digestion. Bile is attached to the Liver, and bile is accumulated from the residual Qi of the Liver, which is discharged into the intestinal cavity when eating to aid digestion of food. The liver stores blood: stores blood, regulates blood volume and prevents bleeding. The Liver is the master of drainage: helps metabolize water and fluid to prevent bulging, and regulates the emotions to avoid Liver-Qi stagnation. Regulates reproductive function: the liver and kidneys are homologous, and the liver meridian surrounds the yin organ. The human body is centered on the five viscera, and the functions of the liver and the viscera interact with each other, and it is clear that the liver and the remaining four viscera together form a whole, so that the functions of the human body can function properly. As a whole, injury to any one organ can affect the normal function of other organs and cause abnormalities in the function of other organs, thus causing systemic symptoms, increasing the burden on the body's functions and affecting the prognosis.

2.1. Spleen and NAFLD

The relationship between the liver and the spleen is mainly that the liver is responsible for draining and the spleen is responsible for transporting and regulating the movement of qi and blood in the body. The "Synopsis of the Golden Chamber" states: "For those who have not yet developed a disease, when they see the disease of the liver, they should know that the liver spreads to the spleen, and should first consolidate the spleen... When they see the disease of the liver, they cannot solve the problem of consolidating the spleen, but can only treat the liver." "The difficult scripture" says: "Liver disease transmits to the spleen The liver refuses to accept it, so it stays knotted for accumulation." "East Medical Treasure Jian" cloud: "the liver's qi, overflowing in the gallbladder, gathered and as essence." Bile is produced by the essence of the liver. Bile is connected to the small intestine and can enter the small intestine through the bile duct to facilitate digestion and absorption by the spleen and stomach. Liver is wood, spleen is earth; wood grinds earth, too much liver wood is too much grams multiplied by each other, liver disease leads to spleen and stomach pathology, causing liver - spleen obstruction, obstructing the whole body qi flow, liver and spleen coordination is the lift in and out of the rhythm.

The intestinal flora as a microorganism is mainly located in the human intestine and has a wide range of regulatory effects on the host. In Chinese medicine physiology, the intestine is considered to belong to the spleen and stomach in a broad sense in the Tibetan theory system of Chinese medicine. The intestinal flora has many functions such as regulating immune function, regulating energy metabolism, absorbing nutrients, etc., which fit well with the concepts of the spleen and stomach doctrine that the spleen is the master of transportation and transformation, the spleen regulates blood, and the spleen is the source of qi and blood biochemistry, respectively, and its functions are similar^[8]. The gut flora interacts with NAFLD, and the gut-liver axis refers to the bidirectional relationship between the gut and its microbiota and the liver; this interaction is established by the portal vein, which is capable of transporting gut-derived products directly to the liver, and the hepatic feedback pathway of bile and antibody secretion into the gut^[9]. Some studies have suggested that both intestinal dysplasia and abnormalities in intestinal barrier function are required to cause chronic liver disease through abnormal regulation of the intestinal-liver axis^[10]. Sharma^[11] found through his study that gut microbiota also plays a crucial role in NAFLD and combined fatty liver disease specific gut microbiota with microbial derived metabolites to provide ideas and methods for future diagnosis and treatment of NAFLD.

Qing Tang Rongchuan "blood evidence" cloud " the nature of the wood in the drainage..... Cannot be sparse drainage valley, seepage leakage in the full disease, in the unavoidable."Qing - Yu Lin "epidemic diagnosis a gain" cloud:"Blood is born in the heart, hidden in the liver, and unified in the spleen."Liver wood gram spleen soil; liver wood is not glorious, spleen soil is anti-gram liver wood, forming a hostile relationship. The main drainage of the liver, the main transport of the spleen, the normal operation of the liver and spleen promote the normal operation of the spleen and stomach function, in order to make the normal operation of the digestive system. Liver blood, spleen blood, liver drainage loss, gas operation is not smooth, unable to help the spleen blood, unable to help the heart blood, causing the operation of qi and blood to be blocked, which will cause stasis. At present, the treatment of NAFLD mainly focuses on invigorating the spleen, removing turbidity, removing fat and removing blood stasis. In the treatment of NAFLD, the spleen plays a crucial role, which is not only symptomatic treatment, but also disease prevention and degeneration.

2.2. Heart and NAFLD

The liver and heart are mainly reflected in the accumulation of blood and main blood and the regulation of spiritual emotion. In blood operation is mainly: liver blood, blood regulation, heart main blood, and heart main blood. In terms of mental emotions, there are main liver drainage, adjust the emotions, adjust the air machine, benefit the meridians; prevent drainage decline-qi depression, and then cause the chest and breast swelling pain; and too much-liver qi hyperactivity, rise too much, liver Yang hyperactivity causes head swelling headache, red eyes, irritability and irritability. Eslam^[12]study found that NAFLD increases patients at risk of cardiovascular disease. Saraya^[13]Using computed tomography scans, NAFLD was closely associated with coronary arterial heart disease (CAD), high-risk plaque features, and higher-grade stenosis. One study^[14] also found that NAFLD was associated with an increased risk of atrial fibrillation (AF), and the strength of the association between NAFLD and atrial fibrillation (AF) was partly attributed to coexisting cardiometabolic risk factors.

The hepatocardial syndrome (HCS) was first proposed by Horsiers^[15] in 1950: "A syndrome in which liver disease causes palpitations, cardiac insufficiency, arrhythmias, and other clinical symptoms, signs, and electrocardiographic abnormalities of cardiac function; the main clinical manifestations are palpitations The main clinical manifestations are palpitations, chest discomfort, hypotension, cardiac rhythm disturbances, etc.; the treatment of the original liver disease is the key, with cardiovascular symptoms can be treated symptomatically." In traditional Chinese medicine, the theoretical basis of liver disease and heart is that the wood makes fire, the liver wood makes fire to the heart, the liver is the mother of the heart, the damage of the liver will inevitably cause the abnormal plasia of the heart. Ming Hu Shenrou "Shen soft five books" cloud " wood is not glorious, then dry wood heart fire." The heart is the official of the monarch, the heart is the main god, and the liver is the mind. The disorder of the heart and liver will lead to the abnormal mind and emotion of the human body, and then affect the normal repair of the body function, and the prognosis is poor. While treating liver disease, the intervention of the heart should not be ignored, the liver qi is insufficient, the heart Yang is depressed, the liver qi deficiency, avoid the heart fire, to prevent the mother disease and son, aggravate the heart fire. Liver hidden blood, the heart main blood, liver and heart damage will lead to blood operation disorders, blood obstruction makes qi disorder, qi and blood disorder is the heart and liver viscera dysfunction, the formation of blood stasis over time.

2.3. Lung and NAFLD

The liver and lung mainly play a synergistic role in the rise and fall of the human body, promoting the normal rise and fall of the liver, and the qi of the lung. Qingyan Tianshi "professional certificate guide for medical cases" cloud "The liver rises from the left, the lung falls from the right, the rise and fall properly, then the air machine stretches." Zhang^[16] believes that the promotion of lung qi is of great significance in the treatment of NAFLD. The results of Ding^[17] study showed that the solid / predecline of FVC in COPD group with NAFLD was more severe than that in COPD group, and the fat in the liver increased, the liver cells were swollen, and the liver volume became larger, which caused enhanced abdominal pressure, hindered the decline of diaphragm and restricted the expansion of the lung. The Korean scholar^[18] found that during 13 years of follow-up, the reduction in FEV₁ (%) and FVC (%) were independently associated with NAFLD, and clinicians were aware that patients with decreased lung function would face increased risk of NAFLD regardless of their smoking status. The current epidemic of novel coronavirus pneumonia (Corona Virus Disease 2019, COVID-19) continues, and as the global prevalence of NAFLD increases, a large proportion of this population may be at serious risk of contracting COVID-19. Although there are few reports of COVID-19 directly causing severe liver injury or liver failure, and liver injury does not appear to be the primary cause of death in COVID-19 patients, the presence of NAFLD and liver injury undoubtedly worsens the clinical status of patients, and in critically ill patients, early prevention of inflammatory storms and respiratory support may also reduce the impact on the liver^[19].

"Suwen - thorns forbidden on the chapter" said: "Tibet has the key, cannot be ignored, the liver is born in the left, the lungs are hidden in the right." Ming Hu Shenrou "Shen Rou five books" "lung evil to the liver, so the pain and qi yong." "Cough and left not sleep liver distension, cough and right not sleep lung distension, all for death." The left rise of the liver and the right drop of the lung make the human body qi machine operate normally, the rise and fall is abnormal, the liver qi does not rise, the lung qi does not fall, resulting in the liver qi stagnation, lung qi depression. The liver is wood, the lung is gold; Jinku, lung gold is too much to lead to the liver wood, liver flourishing lung gold deficiency, the liver against the lung. Studies of traditional Chinese medicine and modern medicine have shown that the liver and lung in terms of disease transmission, so in the treatment of liver disease need to pay attention to the state of the lung, make the two dirty function is normal, avoid grams multiply and the bullying, or caused by air abnormal lung problems, aggravating liver damage, and cause whole body gas running disorder, affect the prognosis.

2.4. Kidney and NAFLD

The physiological functions of liver and kidney are mainly manifested in the homology of sperm and blood, B and ethylene, and the interuse of Tibet and leakage. Liver blood, kidney essence, mutual endowment, mutual transformation, from the liver main drainage, kidney main seal, regulate the woman's menstruation and men's essence function; liver and kidney are hidden fire, phase fire from the door. Qing Huang court mirror "eye Jing dachian": "ancient called b and homologous, liver and kidney together..... Jun fire is only, the Lord is also; fire has two, is the kidney is liver..... Therefore, ethylene ethylene is homologous." NAFLD is associated with an increased risk of chronic kidney disease (CKD)^[20]. Sinn^[21] in a retrospective cohort study found a 41% increase in the incidence of CKD in NAFLD patients, with NAFLD being a significant risk factor for CKD. NAFLD The more severe the patients, the higher the risk of CKD^[22]. Loosen^[23] found that NAFLD is significantly associated with osteoporosis and a large number of patients following German practice; NAFLD patients may benefit from better monitoring of bone dislocation and osteoporosis, which in turn could trigger preventive treatment.

Ming Hu Shenrou "Shen Rou five books" "the kidney of the liver mother, vitality, the liver is enough to bear the heart." "Cover the kidney water is dry, then the liver wood is not glorious." Ming Li Zhongzi "Medical Zong must read": "Oriental wood, no deficiency can not fill, tonifying the liver is so tonifying; the north water, no real can not diarrhea, liver is so diarrhea kidney." "Ran wood neither empty, and words to fill the liver, liver gas can not make, liver blood when self-nourishment also..... Fu a diarrhea, qi and blood are vital; namely diarrhea, water with the house." Kidney aquatic liver wood, kidney water is too strong to cause irascibility can not rise normally, maternal disease and son, cause liver qi stagnation, liver Yang weak to rise; kidney water is insufficient, kidney water can not conserve liver wood, son steal mother qi, leading to the lack of kidney water, so that it can not nourish the organs and organs. The association between NAFLD and osteoporosis in the theoretical system of traditional Chinese medicine is the liver and the main tendon, the kidney and the main bone, and the interaction

between the two promotes the normal operation of human muscles and bones. The essence and blood have the same origin, the essence produces the marrow and the marrow produces the blood; the liver is the master of tendons and blood collection, and the kidney is the master of bones and marrow production, which play a very important role in maintaining the daily activities of the body as well as movement.

3. Conclusion

NAFLD, especially NASH, is also inextricably linked to the high incidence of chronic diseases such as chronic kidney disease, osteoporosis, breast cancer, and colorectal tumors^[24]. Five zang as a whole, attaches great importance to the pathogenesis of liver disease, at the same time, should pay more attention to the connection between the related diseases, this paper using the Tibetan elephant theory discusses the relationship between the liver and spleen, heart, lung, kidney, found that the onset of the liver and spread with the rest of the four dirty close relationship, modern clinical research also shows that NAFLD and digestive system disease, cardiovascular disease, respiratory system, kidney system and other diseases. In the treatment of NAFLD, TCM mainly focuses on invigorating the spleen, removing phlegm and removing blood stasis. Through the analysis of this paper, the author believes that the treatment of NAFLD should start from the whole, and pay attention to the coordination between the five zang organs; in order to achieve the disease prevention, prevent the deterioration of diseases and the transmission of other viscera organs and organs. It also improves clinical efficacy, shortens the disease cycle, reduces patient pain and strengthens prognosis.

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