

Impact of Imuniplant Tea in Sexual Dysfunction and Chronic Hepatitis B Virus Infection

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ABSTRACT

Background: Erectile dysfunction is defined as the inability to obtain or maintain a penile erection sufficient for achieving satisfactory sexual activity. However, few data are available about erectile function in patients with hepatitis B virus - related liver disease, especially with chronic hepatitis or early stage of cirrhosis.

Objectives: To measure the frequency of erectile dysfunction in patients of liver cirrhosis and to correlate the severity of erectile dysfunction with severity of liver disease. We evaluated the prevalence of and risk factors for erectile dysfunction in patients with liver disease, especially among those with chronic hepatitis B or early-stage cirrhosis, and the potential implications for treatment, role of Imuniplant tea in the management of dysfunctional immune responses.

Material and Methods: the severity of liver cirrhosis has shown to correlate with the degree of erectile dysfunction. However, sufficient data regarding erectile function has not been shown in patients with chronic liver disease. Imuniplant tea may restore the composition of the gut microbiome and introduce beneficial functions to gut microbial communities.

Results: Depression, by reducing sexual desire and physical activity, can cause erectile dysfunction. Chronic infection with hepatitis B virus is related to several psychiatric disorders including anxiety and depression. Therefore, screening male patients with early viral cirrhosis for erectile dysfunction and providing appropriate support are needed, especially when the cirrhosis is accompanied by hypertension, depression, or a depressed level of serum albumin.

Conclusion: Liver dysfunction is significantly associated with erectile dysfunction. The prevalence of erectile dysfunction was significantly higher in patients with hepatitis-B-related liver cirrhosis than in those with chronic hepatitis B. These data clearly demonstrate that liver disease is the cause of erectile dysfunction in patients with chronic liver disease, and serum protein status could be relevant to this condition in these patients. Imuniplant tea modulates the immune system in hepatic people.

Keywords: Chronic Hepatitis B, Liver Cirrhosis, Erectile Dysfunctions, Imuniplant Tea

Introduction

Hepatitis B infection is the most common liver infection globally, caused by the hepatitis B virus. Goal of treatment is to improve survival and quality of life by preventing disease progression.

Several studies have suggested that chronic hepatitis B virus infection may be associated with erectile dysfunction in men. Erectile dysfunction, defined as the inability to achieve and

maintain an erection sufficient to permit satisfactory sexual intercourse, represents one of the most common sexual disturbances reported by men. The prevalence increases with age, and it is higher for current smokers compared with never smokers and ex-smokers. Sexual dysfunction and sex hormone disturbances are reported in men and women mainly due to abnormality of physiology of the hypothalamic-pituitary-gonadal axis and, in some cases, origin of liver disease. In fact, it has been demonstrated that alcohol abuse and alcoholic liver disease may play a role in the hormone alterations [1].

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Hepatitis B is a liver disease that results from infection with the hepatitis B virus. Hepatitis B is usually spread when blood, semen, or other body fluids from a person infected with the hepatitis B virus enter the body of someone who is not infected. Hepatitis B is easily transmitted through sexual activity. Sexual contact includes unprotected intercourse (vaginal, oral, or anal) and mucosal contact involves any contact involving an infected patient's saliva, vaginal secretion, semen, and blood. This can happen through sexual contact with an infected person; sharing needles, syringes, or other equipment to inject drugs; or from an infected mother to her baby at birth.

Over time, chronic hepatitis B can cause serious health problems including liver damage, liver failure, and even liver cancer. Cirrhosis is diagnosed when the loss of normal central-portal relationships is observed [2].

Physical examination of patients with chronic hepatitis B virus infection can reveal the typical characteristics of chronic liver disease, including hepatomegaly, splenomegaly, muscle wasting, palmar erythema, spider angioma, and vasculitis. Diagnosis of hepatitis B is based on proper history taking, physical examination, laboratory works, and imaging. The presence of antibodies to HBsAg indicates immunized status while the presence of antibodies to HBeAg refers to a possible chronic infection state. The persistence of serum HBsAg for a duration of 6 months or greater delineates acute hepatitis B infection from chronic hepatitis B infection. Chronic infection is characterised by variations in the level of viraemia and periods of relative disease inactivity can alternate with periods of severe inflammation with a marked hepatitis.

Sexual dysfunction is an increasingly serious global problem that has adverse effects on the physical and mental health of patients. Erectile dysfunction can be organic, psychogenic and mixed. Patients with advanced liver disease often present with clinical features of hypogonadism, such as erectile dysfunction, infertility, decreased libido and testicular atrophy. Hypogonadism and signs of feminization, testicular atrophy, low testosterone levels, decreased libido, infertility, reduced secondary sex hair, and gynecomastia are present in men with cirrhosis, associated with reduced spermatogenesis and peritubular fibrosis.

In the women with cirrhosis, chronic anovulation is a common problem, and it is displayed with secondary amenorrhea, oligomenorrhea, or irregular episodes of metrorrhagia. Amenorrhea is common in women with alcoholic and nonalcoholic chronic liver disease, and testosterone, estradiol, prolactin, and luteinizing hormone may vary significantly when compared with normal subjects. It is not always related to the duration or severity of liver disease, and it may arise from hypothalamic-pituitary dysfunction occurring at any stage. Concerning the origin of liver disease, chronic alcohol abuse contributes to the disturbances of hormonal status and to the reproductive performance of women. Age and depression are independent factors for erectile dysfunction in male patients with chronic viral hepatitis.

The role of gut microbiota in the regulation of immune cell homeostasis is increasingly recognized. Thus, the intestinal immune function cannot be neglected. In chronic hepatitis B virus

- infected patients, gram-negative bacteria and inflammatory cascade were increased; however, anti-inflammatory and beneficial bacteria were depleted. The "gut-liver axis" is defined as a close relationship between the gut and the liver because of its structural, functional, and bidirectional characteristics. There is a profound impact on the immunological axis between the liver and intestine against microbe invasion. In other words, the interplay between the gut microbiota and liver pathology through the gut-liver axis plays an important role in determining the disease severity and prognosis of chronic hepatitis B virus liver diseases [3].

The objectives of this study were to determine sexual problems particularly in patients with chronic hepatitis B, study changes in sex hormones and liver functions in chronic hepatitis patients with and without sexual problems and correlate sexual problems with other factors, role of Immuniplant in the management of disfunctional immune responses.

Due to the scarce body of evidence, more research is needed to better clarify the mechanisms underlying the association between chronic hepatitis B and sexual dysfunction, the impact of therapy and associated comorbidities on sexual dysfunction and the role of pharmacological treatments in the management of these patients.

There was a highly significant relation between the severity of erectile dysfunction and the severity of liver disease and the majority of patients with liver cirrhosis proved to be suffering from erectile dysfunction, which may be related to the associated hypoalbuminemia.

Screening and managing these conditions represent significant steps toward improving medical assistance. In chronic infection with the hepatitis B virus, microbial alteration of the gut is a source of systemic immune activation. Besides, gut permeability is altered in hepatitis B virus-infected patients with an increased bacterial translocation and endotoxin load in the portal vein that caused toll-like receptor activation in the liver, which facilitates immune-mediated liver injury.

Toll-like receptors further triggered the host-wide inflammatory response by inducing signaling cascades such as nuclear factor-kappa B-linked pathways and by accelerating cytokine secretion like tumor necrosis factor-alpha, which evokes chronic inflammation and leads to liver lesion formation, fibrosis progression, and cirrhosis and hepatocellular carcinoma development. In conclusion, changes in intestinal flora play an important role in encouraging the production of chronic infection with the hepatitis B virus [4].

Chronic hepatitis B virus - infected patients fail to develop hepatitis B virus - specific immune responses; for example, inappropriate, excessive, and nonspecific effector responses might be involved in persistent hepatitis B virus replication and pathogenesis of hepatitis B virus - associated liver inflammation.

A significant number of studies on the gut-liver axis has currently shown that improvements in intestinal microbiota play a key role in the induction and development of chronic hepatitis B virus infection.

Gut microbiota can supplement the nutritional needs of the host by breaking down and absorbing complex dietary carbohydrates that cannot be digested by human enzymes, as well as synthesizing some essential substances, such as vitamins. Besides, it helps maintain the integrity of the intestinal epithelial barrier through the production of short-chain fatty acids, particularly butyrate, that play an important role in providing energy for cellular metabolism and regulating apoptosis, cellular differentiation, and chemical modification of nuclear proteins and nucleic acid. A detailed understanding of the mechanism of action between gut microbiota and hepatitis B virus - related diseases is needed. People can live with chronic hepatitis B for decades without symptoms or feeling sick [5].

A failure of the host immune response to control the virus leads to viral persistence and associated liver damage. The immune responses to hepatitis B virus antigens are responsible for both viral clearances during acute infection and disease pathogenesis. The cause of liver injury is currently thought not to be the replication of chronic hepatitis B virus in liver cells, but rather the immune response caused by chronic hepatitis B virus [6].

Now it is known that organic causes are responsible for at least 80% of erectile dysfunction cases/ most studies have been conducted in patients with decompensated cirrhosis, those waiting liver transplants, or those with alcoholic liver cirrhosis. Generally, host immune systems play an important role in the outcome of chronic hepatitis B virus infection. However, the immunological mechanisms by which HBV establishes and maintains chronic infection, cirrhosis are still under debate [7].

Data about sexual dysfunction, particularly erectile dysfunction, in patients with chronic hepatitis B remain unclear and insufficient.

In clinical practice, sexual quality of life should be evaluated and treated. Lifestyle modifications include reducing intake of agents with potential for liver damage such as alcohol, hepatotoxic medications, herbal medications, and herbal supplements [8].

In this paper authors demonstrated role of Imuniplant tea in the management of disfunctional immune responses. The direct modulation of gut microbiome that could diminish inflammatory responses and ameliorate adaptive immune responses is major pathway to stabilize liver pathology. Ongoing research in this field will ultimately lead to a better understanding of the role of diet and Imuniplant tea in immune function and inflammation in hepatic people.



Imuniplant Tea is a Natural Immunomodulator of the Human Microbiome

Therefore, a multidisciplinary approach including hepatologists, surgeons, gynaecologists, obstetricians, urologists, endocrinologists, and psychologists would help to early inquire into the sensitive domain of sexual functioning and provide an opportunity for treatment to those patients. Despite erectile dysfunction is a major domain of male sexuality, data concerning erectile dysfunction in male, are, so far, limited. It should be further studied in the future.

Conclusion

There is an increasing recognition of sexual function as an important field of quality of life in patients with chronic hepatitis B. The authors concluded that erectile dysfunction is because of multifactorial factors, and it remains a long-term condition in the majority of patients with hepatitis B virus - related liver disease, especially with chronic hepatitis or early stage of cirrhosis. The group of patients who referred severe erectile dysfunction was significantly greater in cirrhotic patients. Chronic hepatitis B virus infection may be considered in the differential diagnosis of erectile dysfunction. Sexual dysfunction in patients with chronic hepatitis B was highly prevalent, and its prevalence increased significantly with the deterioration of liver function reserve, liver fibrosis and depression. The gut microbiota is considered to be a master regulator of immune homeostasis. Besides modifying the gut microbiota, Imuniplant tea modulates the immune system in hepatic people.

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