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Comprehensive Analysis of the "Offense and Defense" Strategy in the Management of Ascites in Cirrhotic Patients

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Abstract: Ascites in liver cirrhosis is a common and severe complication that occurs during the decompensated stage of the disease. Globally, its incidence is on the rise year by year. As a significant marker of decompensated liver cirrhosis, ascites poses a challenging problem in clinical treatment. With the progression of the disease, ascites not only causes abdominal distension and unbearable pain, severely affecting the quality of life, but also leads to a series of life-threatening complications, such as spontaneous bacterial peritonitis and hepatorenal syndrome, posing a great threat to the patients' health and making the treatment of ascites in liver cirrhosis extremely urgent. The "offensive and defensive" strategies play a crucial role in the treatment of ascites in liver cirrhosis. "Offense" refers to the adoption of aggressive measures for stubborn conditions that do not respond well to conservative treatment, such as rapidly relieving abdominal pressure through paracentesis, improving portal hypertension via transjugular intrahepatic portosystemic shunt (TIPS), and fundamentally solving liver lesions through liver transplantation. Meanwhile, traditional Chinese medicine's syndrome differentiation and external treatment methods also provide diverse pathways to tackle the problem, actively combating the disease and enhancing patients' chances of survival. "Defense" focuses on basic support and gentle regulation, strictly limiting sodium and water intake, ensuring bed rest to reduce the liver burden, and using diuretics and albumin infusion to maintain the body's fluid balance, safeguarding the basic physiological functions of the body and laying a solid foundation for subsequent treatment. This thesis centers on a thorough analysis of the application of the "offensive and defensive" strategies throughout the treatment process of ascites in liver cirrhosis. On one hand, it elaborates on the mechanisms of ascites formation and diagnostic key points to clarify the nature of the disease. On the other hand, it systematically dissects various measures of "offense" and "defense," including specific surgical and pharmacological methods.

1. Introduction

1.1. Epidemiological Status and Clinical Significance of Ascites in Liver Cirrhosis

As an important marker and common severe complication of the decompensated stage of liver cirrhosis, the epidemiological status of ascites in liver cirrhosis is far from optimistic. According to relevant research statistics, liver cirrhosis is the terminal stage of various chronic liver diseases and ranks 11th among the common causes of death worldwide[1]. The incidence of ascites in patients with decompensated liver cirrhosis is quite high, reaching up to 55.6%. This means that a large number of patients with liver cirrhosis are at risk of developing ascites, and once it progresses to the decompensated stage with ascites, the condition often becomes more intractable. Studies have shown that the one-year mortality rate of patients with liver cirrhosis and ascites is about 20%, and the five-year mortality rate can be as high as 44% to 85%[2]. The treatment of ascites in liver cirrhosis often requires long-term repeated hospitalizations and high medical costs, imposing a heavy economic burden on patients' families and society. Therefore, strengthening the early diagnosis, treatment, and prevention of ascites in liver cirrhosis is of great importance.

1.2. Pathogenesis of Ascites in Liver Cirrhosis

The pathogenesis of ascites in liver cirrhosis is a complex multifactorial process. Liver cirrhosis leads to the destruction of liver structure, fibrous tissue proliferation, formation of false lobules, and increased intrahepatic vascular resistance, resulting in portal hypertension. This causes an increase in the pressure of capillaries in the abdominal cavity, increased vascular permeability, and increased filtration of fluid, leading to the production of a large amount of lymph. When lymph production exceeds the capacity of lymphatic return, fluid leaks into the abdominal cavity, forming ascites. At the same time, in liver cirrhosis, liver function is impaired, and the liver's ability to synthesize albumin is greatly reduced, leading to a decrease in plasma colloid osmotic pressure, making it easier for fluid in the blood vessels to seep into the abdominal cavity. In addition, portal hypertension leads to relatively insufficient effective circulating blood volume, activating the renin-angiotensin-aldosterone system (RAAS) and increasing the secretion of antidiuretic hormone, resulting in enhanced renal reabsorption of sodium and water, further exacerbating water and sodium retention and providing conditions for the accumulation of ascites.

1.3. Challenges and Dilemmas of Traditional Treatments

Although traditional treatments for ascites in liver cirrhosis have achieved certain results, many difficulties and challenges have gradually emerged in clinical practice. In terms of pharmacological treatment, long-term use of diuretics can easily lead to electrolyte disturbances, which not only exacerbate physical discomfort, such as fatigue and arrhythmias, but also may induce severe complications such as hepatic encephalopathy, worsening the condition. Moreover, as the disease progresses, diuretic resistance becomes increasingly common, and some patients find it difficult to reduce ascites even with increased doses effectively. Although albumin infusion can temporarily increase colloid osmotic pressure and help reduce ascites formation, albumin is limited in supply and expensive, imposing a heavy economic burden on patients. The feasibility of long-term continuous infusion is low, restricting its widespread application. In terms of general treatment measures, limiting sodium and water intake often faces the problem of poor patient compliance, with many people unable to strictly follow medical advice, resulting in poor treatment outcomes. Traditional paracentesis for ascites also has drawbacks. Repeated puncture procedures not only increase patient suffering but also easily lead to infections, such as puncture site infections and

peritonitis, which may trigger systemic inflammatory responses and worsen liver and systemic damage. Moreover, if the speed of ascites drainage is not properly controlled, it can cause a sudden drop in abdominal pressure, inducing hepatorenal syndrome and a rapid deterioration of renal function in a short time, greatly increasing the difficulty of treatment and patient mortality. From the perspective of the disease itself, the etiology of ascites in liver cirrhosis is complex and often coexists with multiple underlying diseases, such as hypertension and diabetes. Traditional treatment plans find it difficult to take into account these comorbidities, leading to a situation where addressing one problem may neglect another, and an overall optimal treatment cannot be achieved. In summary, traditional treatments for ascites in liver cirrhosis face numerous dilemmas, and there is an urgent need to explore new comprehensive "offensive and defensive" strategies to break through existing bottlenecks and truly improve patient prognosis.

2. The Connotation and Theoretical Basis of the "Offensive and Defensive" Strategies

2.1. Analysis of the "Offensive" Strategy

2.1.1. Antiviral Treatment for Hepatitis B Virus-Related Liver Cirrhosis Ascites

Antiviral drugs can inhibit the reverse transcription process of HBV, block the synthesis of viral DNA, and thereby reduce viral load. This can effectively alleviate liver inflammation, reduce the attack of immune cells on hepatocytes, and prevent further liver damage. On the other hand, sustained suppression of viral replication helps promote the repair and regeneration of hepatocytes, enhancing the liver's ability to synthesize albumin. An increase in albumin levels can raise plasma colloid osmotic pressure, reducing the leakage of fluid from blood vessels and thereby alleviating ascites symptoms. Additionally, antiviral treatment can improve liver circulation, lower portal pressure, and reduce ascites formation. Hu Dashan[3]and others found through research that for HBV DNA-positive patients with liver cirrhosis ascites who are undergoing initial treatment, entecavir antiviral therapy based on comprehensive internal medicine treatment can improve liver reserve function, alleviate decompensated liver function, and enhance the quality of life. After treatment, serum transaminase (ALT, AST) levels significantly decreased, indicating reduced liver inflammation; albumin levels gradually increased, enhancing the ability to regulate ascites. Gong Wenhuan[4] found through retrospective studies that the combination of antiviral drug entecavir and Wuling Powder is effective in treating ascites in hepatitis B liver cirrhosis, significantly improving liver function and promoting ascites resolution, normalizing patient weight and urine output, and improving quality of life. Long-term antiviral treatment can also reduce the risk of disease progression, decrease the occurrence of severe complications such as liver failure and liver cancer, and prolong patient survival. Antiviral treatment is highly effective in the treatment of HBV-related liver cirrhosis ascites and is a key measure to improve patient prognosis.

2.1.2. The Key Role of Abstinence from Alcohol in Alcoholic Liver Cirrhosis Ascites

Alcohol is primarily metabolized in hepatocytes, where key enzymes convert alcohol to acetaldehyde and then to acetic acid. This process generates ROS and acetaldehyde, leading to oxidative stress, cell damage, inflammatory responses, and fibrosis. It also indicates that ROS released during alcohol metabolism promotes the secretion of high-mobility group protein B1 (HMGB1) and mitochondrial DNA, which are damage-associated molecular patterns (DAMPs), from hepatocytes, thereby initiating liver inflammation and recruiting immune cells to the site of injury. Furthermore, alcohol consumption suppresses the expression of miR-148a in hepatocytes, and restoring miR-148a levels can reverse alcohol-induced hepatic steatosis and inflammation[5]. If

alcohol-induced damage is in the early stage, damaged hepatocytes can be replaced by regeneration. In cases of fatty liver, some degree of recovery can be observed within three to six months of abstinence, with possible improvements in liver function indicators. However, this self-repair capacity is not unlimited. If the damage to the liver caused by alcohol is too severe or prolonged, the repair process becomes extremely difficult, and it may not be possible to fully restore to a healthy state[6].

2.1.3. Principles and Techniques for the Rational Use of Diuretics

Loop diuretics such as furosemide primarily inhibit the Na+-K+ ATPase associated with the active reabsorption of NaCl in the thick ascending limb of the loop of Henle in the renal tubule, thereby exerting a diuretic effect[7]. Thiazide diuretics such as hydrochlorothiazide mainly act on the proximal end of the distal convoluted tubule, inhibiting the reabsorption of sodium and chloride ions in the proximal convoluted tubule and the loop of Henle, promoting the excretion of sodium, chloride, and potassium ions. Potassium-sparing diuretics act on the distal convoluted tubule and cortical collecting duct, with common drugs including spironolactone and triamterene, which have the effect of retaining potassium and excreting sodium. Selective vasopressin V2 receptor antagonists such as tolvaptan are a new type of diuretic that competitively binds to the vasopressin V2 receptors in the renal tubules and collecting ducts, preventing fluid reabsorption and promoting the excretion of electrolyte-free fluid[8]. For patients with moderate ascites at first onset, spironolactone monotherapy is recommended, with an initial dose of 60-80 mg/day and a conventional upper limit of 100 mg/day. For patients with grade 2/3 ascites or recurrent ascites, the combination of spironolactone and furosemide is significantly more effective than increasing the dose of spironolactone or sequential combination with furosemide, and the incidence of hypokalemia is significantly reduced. The initial doses are spironolactone 40-80 mg/day and furosemide 40 mg/day, with doses of spironolactone and furosemide increased every 3-5 days up to the conventional upper limit[9]. Tolvaptan is not recommended for patients with grade 1 ascites, but for patients with grade 2/3 ascites, recurrent ascites, and poor response to conventional diuretics (furosemide 40 mg/day, spironolactone 80 mg/day), tolvaptan can be used[10]. Diuretic-related complications mostly occur within one week of treatment, so it is recommended to monitor changes in serum creatinine, serum sodium, and potassium ion concentrations within 3 days of medication to promptly detect adverse events such as renal impairment and electrolyte disturbances. If the serum Na+ concentration is less than 125 mmol/L, diuretics should be discontinued, and fluid restriction and potassium supplementation should be initiated[11].

2.1.4. Indications and Standardized Operations for Paracentesis

When patients have a large amount of ascites and experience significant compressive symptoms, such as severe abdominal distension, difficulty breathing, lower limb edema, etc., which affect their quality of life and cardiopulmonary function, paracentesis is an effective method to relieve symptoms. If patients have oliguria and abnormal renal function due to insufficient renal perfusion caused by ascites, reducing intra-abdominal pressure through fluid removal can help improve renal circulation and restore renal perfusion. In addition, paracentesis can be performed to obtain fluid for examination for patients who need to clarify the nature of ascites to assist in disease diagnosis, such as suspected ascites infection or tumor metastasis. Before performing paracentesis, it is necessary to thoroughly understand the patient's medical history, coagulation function, etc., and provide psychological counseling to the patient. Patients are generally placed in a semi-recumbent or supine position, and an appropriate puncture site is selected, often at the intersection extended from the umbilicus and the anterior superior iliac spine. Strict aseptic principles must be followed during the

procedure, with routine disinfection and draping of the puncture site, and adequate local anesthesia. The puncture should be performed gently and slowly to avoid damaging intra-abdominal tissues and blood vessels. When the puncture needle enters the abdominal cavity and ascites flow out, a drainage device is connected for fluid removal. To prevent infection, the entire procedure must be strictly aseptic, and the puncture site should be kept clean and dry after the procedure. If infection occurs, antibiotics should be administered promptly. Vascular injury during puncture may lead to bleeding, and the patient's coagulation function should be assessed before the procedure, with puncture sites avoiding obvious blood vessels. Minor bleeding can be controlled by pressure, while major bleeding may require further intervention, such as surgical hemostasis. If the bowel is punctured, peritonitis may occur. If bowel injury is suspected, the procedure should be immediately stopped, and appropriate surgical intervention should be considered. The speed of fluid removal should not be too fast; generally, the initial volume of fluid removed should not exceed 1000 ml to prevent a sudden drop in intra-abdominal pressure, which can cause hypotension, shock, and other adverse reactions. Subsequent removal can be increased according to the patient's condition, but generally not exceeding 3000 ml per session. For patients with a large amount of ascites, continuous slow drainage can be used, which can effectively relieve symptoms while reducing the occurrence of complications.

2.1.5. The Application Value of Transjugular Intrahepatic Portosystemic Shunt (TIPS) in Specific Patients

TIPS (Transjugular Intrahepatic Portosystemic Shunt) primarily reduces portal venous pressure based on the principle of shunting. Through interventional techniques, a shunt channel is established between the intrahepatic hepatic vein and the portal vein, with a stent placed to allow part of the blood that would normally flow through the portal vein into the liver to directly enter the hepatic vein via this channel, bypassing the high-resistance areas within the liver. This reduces the volume of blood in the portal vein, thereby lowering portal venous pressure and alleviating a series of symptoms caused by portal hypertension. For patients with refractory ascites due to liver cirrhosis, the accumulation of a large amount of ascites leads to increased intra-abdominal pressure, which in turn affects the patient's respiratory and renal functions and increases the risk of complications. TIPS can effectively reduce the occurrence of these complications by lowering portal venous pressure and reducing ascites, improving the patient's quality of life and survival rate[12].

2.2. Explanation of the "Defensive" Strategy

2.2.1. Preventive Measures for Spontaneous Bacterial Peritonitis

When the intestinal microbiota is imbalanced, the number of beneficial bacteria decreases, the barrier function is impaired, and intestinal permeability increases, making it easier for bacteria and their toxins in the intestine to translocate into the abdominal cavity. At the same time, the imbalance leads to abnormal immune regulation, resulting in a weakened immune defense function of the body, which is unable to effectively clear invading bacteria. Additionally, the imbalance of the intestinal microbiota also causes dysregulation of inflammatory responses, with increased pro-inflammatory factors that further damage tissues, ultimately jointly promoting the occurrence of spontaneous bacterial peritonitis. Increasing the intake of dietary fiber can provide energy for intestinal epithelial cells, promote their growth and repair, regulate the pH value of the intestine, and inhibit the growth of harmful bacteria. Oral probiotics can regulate the balance of the intestinal microbiota, enhance intestinal barrier function, and prevent the occurrence of spontaneous bacterial peritonitis. Studies

have shown that oral probiotic preparations containing Bifidobacterium and Lactobacillus acidophilus can increase the number of beneficial bacteria, reduce intestinal permeability, and decrease the release of inflammatory factors. Antibiotics are important for treating bacterial infections, but improper use can disrupt the intestinal microbiota and increase the risk of spontaneous bacterial peritonitis, so rational use is crucial. Clinically, it is necessary to strictly control indications, avoid misuse, and select sensitive narrow-spectrum antibiotics based on pathogen culture and drug sensitivity to minimize the impact on the intestinal flora. For high-risk patients with liver cirrhosis ascites, prophylactic medication can be administered according to medical advice, selecting drugs with minimal impact and strictly controlling the duration and dosage. For example, short-term use of ciprofloxacin or other quinolones can reduce the risk of intestinal Gram-negative bacterial infections, and it is necessary to monitor changes in the intestinal microbiota.

2.2.2. Early Identification and Prevention of Hepatorenal Syndrome

Severe liver disease leads to a reduction in effective circulating blood, thus causing renal vasoconstriction. The liver's ability to clear endotoxins is reduced, and endotoxins induce renal vasoconstriction. An imbalance of vasoactive substances reduces renal cortical blood flow. The sympathetic nervous system is activated, further causing renal vasoconstriction, reduced renal blood flow, and decreased glomerular filtration rate, ultimately leading to renal dysfunction and the development of hepatorenal syndrome. Early monitoring of indicators such as creatinine, blood urea nitrogen, and glomerular filtration rate can promptly detect abnormalities in renal function, aiding in the early diagnosis of hepatorenal syndrome. At the same time, the use of nephrotoxic drugs such as aminoglycoside antibiotics and nonsteroidal anti-inflammatory drugs should be avoided as much as possible. The indications for antibiotic use should be strictly controlled, and antibiotics with minimal nephrotoxicity should be selected based on pathogen culture and drug sensitivity test results to avoid the misuse of broad-spectrum antibiotics.

2.2.3. Nutritional Assessment and Characteristics of Nutritional Requirements in Patients with Ascites in Liver Cirrhosis

Gastrointestinal congestion leads to reduced gastrointestinal motility and decreased secretion of digestive juices, impeding the digestion of food in the gastrointestinal tract. On one hand, protein intake is reduced, and high-protein foods such as meat and eggs in a normal diet are not fully digested and absorbed. On the other hand, the liver's ability to synthesize albumin is impaired due to cirrhosis, while the body is in a state of high catabolic metabolism with increased protein consumption. Patients gradually experience weight loss and muscle atrophy, severely affecting their quality of life and recovery capabilities. Poor digestion and absorption lead to insufficient intake of various vitamins and minerals, thereby reducing the body's immune function and making patients more susceptible to infections. Common nutritional assessment methods for patients with ascites in liver cirrhosis include: (1) Subjective Global Assessment (SGA), where medical staff ask in detail about the patient's dietary intake over the past week, including meal portions and food types, observe signs of weight loss, muscle relaxation, and edema, and inquire about feelings of anorexia and fatigue, then categorize the nutritional status accordingly. (2) Serum protein testing, which involves collecting fasting venous blood to measure serum albumin, prealbumin, and transferrin levels, with fluctuations in these values reflecting nutritional dynamics, such as decreased albumin levels often indicating malnutrition. (3) Anthropometric measurements, including measuring the upper arm circumference, triceps skinfold thickness, and calculating the body mass index, to

comprehensively assess the patient's nutritional reserves and overall condition, providing a basis for nutritional intervention.

3. Analysis of the Advantages and Limitations of the "Offensive and Defensive" Strategies

3.1. Exploration of Advantages

"Offense" aims to actively eliminate the root causes of ascites and reverse the process of liver fibrosis. On one hand, advanced interventional techniques such as TIPS are used to precisely reduce portal hypertension and decrease ascites formation; targeted antiviral treatment directly targets viral causes such as hepatitis B and C, suppressing liver inflammation. On the other hand, combined with novel immunomodulators, the body's immune cells are awakened to clear debris from damaged hepatocytes, paving the way for liver regeneration. "Defense" focuses on consolidating the foundation and enhancing the liver's self-repair capabilities, guarding against the stealthy attacks of complications. Through personalized nutritional support, based on the patient's nutritional assessment, high-quality proteins and vitamins are provided to repair gastrointestinal mucosa and improve nutritional absorption efficiency; supplemented with probiotics to regulate the intestinal microbiota, strengthening the intestinal barrier to prevent the translocation of bacteria and toxins that could trigger spontaneous bacterial peritonitis.

3.2. Comparison with Traditional Treatments

3.2.1. Ascites Relief

Traditional diuretic treatment often encounters diuretic resistance, where although the volume of ascites may temporarily decrease, it is prone to rebound, and long-term use further increases the risk of electrolyte disturbances and renal damage. In contrast, TIPS can effectively reduce portal venous pressure and improve renal function, thereby enhancing the patient's renal function and serum creatinine levels, promoting protein metabolism, improving nutritional status, and enhancing the patient's quality of life[13]. Studies have shown that in 36 patients (77%), ascites began to improve within 4 weeks after TIPS, and in 40 patients (85%), it was effective within 8 weeks after TIPS[14] . After Cox multivariate regression analysis, it was found that creatinine and bilirubin levels are closely related to prognosis and survival. Patients with lower levels of creatinine and total bilirubin have a higher one-year survival rate after TIPS compared to those with higher levels, which is more conducive to short-term postoperative assessment of patient prognosis and survival. TIPS has definite therapeutic effects on refractory ascites in liver cirrhosis, providing a broader range of treatment options for patients and improving their quality of life and survival period.

3.2.2. Improvement of Liver Function

Simply supplementing albumin can only temporarily increase colloid osmotic pressure and cannot deeply repair hepatocytes. Yu Hong et al. [15] found that in patients with decompensated hepatitis B liver cirrhosis, combining protein nutritional diet therapy during antiviral treatment can effectively improve liver function, inhibit the fibrosis process of hepatocytes, promote the negativity of HBV-DNA in patients, and improve the nutritional and ascites conditions of patients. Xu Xiaolou et al.[16]retrospectively analyzed 120 patients with hepatitis B cirrhosis ascites and found that the observation group had lower fluctuations in ascites depth, abdominal circumference, and nutritional status physical indicators compared to the control group, while biochemical indicators were higher than the control group ($P<0.05$). This indicates that personalized traditional

Chinese medicine nutritional care intervention can effectively promote the resolution of ascites and improve nutritional status, with clinical promotion value.

3.2.3. Limitations Analysis

In the "offensive and defensive" strategy, advanced treatment methods such as TIPS surgery and new antiviral drugs are costly and consume a significant amount of medical resources. These methods often require high-end equipment and professional technical support, leading to increased costs and potentially increasing the economic burden on patients. At the same time, their application also consumes a large amount of medical resources, including equipment, drugs, and the time of medical staff, which may affect the accessibility of medical services for other patients. Additionally, certain treatment methods, such as TIPS surgery, are complex and require high-end equipment and professional skills, making them difficult to implement in grassroots hospitals or resource-poor areas. This limits their promotion and application in these regions, leading to an uneven distribution of medical resources and affecting patient accessibility and treatment outcomes. Finally, complex treatment plans and long treatment cycles may lead to decreased patient compliance. Patients may fail to take medication on time or adhere to dietary restrictions due to lack of understanding, impatience, or inability to afford it, thereby weakening the treatment effect. It is necessary to strengthen doctor-patient communication, simplify the plan, and provide support to improve compliance and ensure treatment effectiveness.

4. Future Prospects and Summary

4.1. Future Research Directions

Further research on the indications, timing, and standardization of TIPS to improve success rates and safety, focusing on long-term efficacy and prevention of complications after surgery, such as shunt stenosis and hepatic encephalopathy, through improved stent design and drug therapy. To reduce risks, research on precise puncture techniques should be conducted to explore the impact of drainage speed and volume on circulatory function and ascites regression, aiming to formulate individualized drainage plans. The optimal dosage and timing for albumin or colloid solution supplementation after drainage should be determined to enhance treatment efficacy. For refractory ascites, the safety and effectiveness of low-flow abdominal pumps require evaluation to establish application protocols, minimize complications such as pump-related infections and blockages, and ultimately improve patient quality of life.

From the perspective of "offense": Further investigation is warranted into TIPS optimization including indications, surgical timing, and procedural standards to improve success rates and safety. Long-term monitoring of postoperative outcomes (e.g., shunt stenosis, hepatic encephalopathy) and complication prevention strategies (through stent design innovation and pharmacotherapy) should be prioritized. Notably, evidence-based protocols for precise puncture techniques and individualized drainage regimens remain critical to risk mitigation.

From the perspective of "defense": Large-scale clinical trials should be conducted to evaluate the effects of different sodium restriction levels on the prognosis of cirrhotic patients with ascites, aiming to establish evidence-based sodium intake guidelines. Compliance enhancement strategies should also be investigated. Novel diuretic agents or combination therapies should be systematically explored to maximize diuretic efficacy while minimizing adverse events. Diuretic regimens should be individualized based on renal function, electrolyte balance, and other patient-specific factors. The metabolic profile of cirrhotic patients with ascites requires comprehensive analysis, including nutritional assessment and formulation of evidence-based support protocols encompassing protein,

caloric, and micronutrient supplementation. Such interventions should be evaluated for their impact on liver function improvement, ascites regression, and long-term outcomes, as well as their potential to prevent treatment-related complications.

4.2. Summary

The "offensive and defensive" strategy is crucial and feasible in the treatment of ascites in liver cirrhosis. "Offense" includes TIPS, paracentesis, and low-flow ascites pump implantation, requiring research on indications, timing, standards, and prevention of complications. "Defense" encompasses sodium restriction, diuretic therapy, and nutritional support therapy, necessitating verification of sodium restriction standards, exploration of new diuretic regimens, and development of nutritional support plans. Clinical doctors are encouraged to actively apply and refine this strategy to improve treatment outcomes and quality of life for patients.

5. Conclusion

The "offensive and defensive" strategy demonstrates the charm of individualized treatment in the treatment of ascites in liver cirrhosis. Based on the patient's condition, etiology, and physical status, either an aggressive approach such as TIPS surgery and new antiviral drugs or a defensive approach such as sodium restriction, diuretics, and nutritional support can be adopted. Multiple coordinated efforts break through traditional bottlenecks. This strategy is of great significance to the prognosis of patients. In the short term, it can rapidly relieve symptoms such as ascites and improve patient comfort. In the long run, it can reduce hospitalization frequency and alleviate the economic and psychological burden on patients. Through precise treatment, it is hoped that the survival period of patients can be extended and the quality of life improved. In the future, with the iteration of technology and in-depth research, this strategy will move towards a standardized and refined diagnostic and treatment paradigm, bringing hope to more patients with ascites in liver cirrhosis, leading a new benchmark in the treatment of liver diseases, and opening a new chapter in individualized and efficient treatment. Patients can receive more precise and effective treatment, truly achieving optimization and breakthrough in treatment.

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