

# Influence of Magnesium Isoxalate on Hyaluronic Acid, Type IV Collagen and Laminin of Chronic after Hepatitis Fibrosis

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**Abstract:** Objective To explore the effect of Magnesium isoglycyrrhizinate on the index of liver fibrosis after chronic hepatitis. Methods. 80 cases of chronic hepatitis with hepatic fibrosis were randomly divided into treatment group(n=40)And control group (n=40). Control group was received routine comprehensive treatment and the treatment group were received Magnesium isoglycyrrhizinate of 200mg per day for 4 weeks on the basis of routine therapy. It was compared that changes of serum liver fibrosis index in two groups at the end of the course. Results: Difference was statistically significant between the two groups Of Serum liver fibrosis indexes Which contains Hyaluronic acid (HA), type IV collagen (IV-C)and laminin (LN) (P < 0.05).Conclusion Magnesium isoglycyrrhizinate has inhibitory effect on the formation of liver fibrosis by promote the regeneration of hepatocytes, with remarkable curative effect and little adverse reactions .

**Keywords:** Magnesium oxalate; Chronic hepatitis fibrosis; Hyaluronic acid; Type IV collagen; Laminin

## 1. Introduction

Hepatic fibrosis is a chronic pathological process, which refers to abnormal hyperplasia of connective tissue in the liver caused by various pathogenic factors. the process of fibrosis can develop into cirrhosis if the damage factor cannot be removed for a long time. The current situation report is as follows that to observe the improvement of index of liver fibrosis after chronic hepatitis which conventional comprehensive treatment as with as magnesium isoglycyrrhizinate

## 2. Materials and Methods

### 2.1. Materials

The general information There were 80 cases of liver fibrosis after chronic hepatitis, randomly divided into two groups, 40 control group(40), male(25)and female(15), with age ranging from 30 to 51 years old, with an average age of (40.5+ 5.3).treatment group(40), male(24)and female(16), with age ranging from 31 to 52 years old, with an average age of (41.7+ 5.5) .Two groups of patients were statistically treated with no significant difference in sex, age, prior treatment liver function, serum liver fibrosis and other indicators..

### 2.2. Methods

The control group was used for 4 weeks of routine comprehensive treatment, including Protecting liver, reducing enzyme, reproducing yellow, promoting liver cell regeneration, Supportive care, control of infection, Prevention and treatment of complications. The treatment group was added with Magnesium isoglycyrrhizinate 200mg and added 5% glucose solution 250ml intravenous drip, 1 time per day for 4 weeks on the basis.

### 2.3. Indicators

We observed the changes of HA, IV-C and LN that serum liver fibrosis indexes include two groups of patients at the end of the course.

### 2.4. Adverse reactions

It found no apparently change of blood routine, routine urine and kidney function of the treatment group through dynamic observation that used Magnesium isoglycyrrhizinate, Except for 1 case patients appeared a little rash, 2 cases with itchy skin, no obvious adverse reactions

### 2.5. Statistical methods

Measuring data using T test and counting by chi-square test of the comparison between the two groups.

**Table 1. Liver fibrosis indexes of two groups of patients after treatment**

Case	HA(ng/mL)	IV—C(ng/mL)	LN(ng/mL)
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Treatment 40	prior treatment	314.2 ± 205.7	65.7 ± 30.6	178.5 ± 70.3
	posttreatment	178.5 ± 153.3*	48.3 ± 23.1*	116.8 ± 56.8*
Control 40	prior treatment	318.6 ± 209.2	66.2 ± 30.8	176.3 ± 69.6
	posttreatment	265.4 ± 184.7*	54.6 ± 28.3*	145.2 ± 63.2*

Note: the treatment group compared with control group p<0.05

**3. Discuss**

HBV infection---Chronic hepatitis---cirrhosis---primary carcinoma of cancer as a tetra-logy of liver disease during the development of chronic hepatitis. Primary liver cancer is one of common malignant tumor in our country and mortality rate Is the second in the malignant tumor. It is great significance to improve the prognosis of chronic liver disease.Through Anti-fibrosis treatment in patients with chronic hepatitis to prevent the occurrence of liver cirrhosis.

Magnesium isoglycyrrhizinate is a kind of glycyrrhizic acid preparation. It has certain anti-inflammatory, anti fibrosis, detoxification, biological oxidation resistance and improve liver function in the patient's body. It regulates metabolism and excites nerve through activate or inhibit various enzymes in patients to achieve activity hormone receptors[1]

LN is an ingredient of collagen glycoprotein and distributes in the transparent layer of basement membrane of the outer cell mass.

LN and IV-C deposition endothelial basement membrane in that Disse clearance When the liver fibrosis. It not only prevent that exchange of various nutrient between hepatocyte and hepatosinus, but also form portal hypertension, which plays an important role in the cirrhosis of the liver HA is A kind of macromolecular amino polysaccharide. Its level gradually increases with the development of hepatitis Due to the ability decreases to absorb and decompose HA when hepatic lesion is involved in endothelial cell work.

IV-C is the main component of the basement membrane .It is destroyed When the liver fibrosis occurs and the IV-C is heavily deposited in the basement membrane During collagen hyperplasia. It was positively correlated with the grade of hepatic fibrosis. HA, LN and IV-C are positively correlated with the extent of liver damage and reliable indicators for the diagnosis of liver fibrosis.[2]

This study shows that It is demonstrated the anti-fibrosis effect of magnesium glycyrrhizin which is statistically significant between the two groups, because the indexes of liver fibrosis recovered of the treatment group was obvious after treatment. It's the same as qisheng-zhang's.[3]

Due to the study of four weeks, the treatment of the liver fibers has been determined to further study.

**4. Acknowledgment**

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