

## **The changes of glucose metabolism in the brain before and after antiviral therapy in patients with chronic hepatitis C and cirrhosis**

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### **Abstract**

Recently, PEG-IFN and ribavirin combination therapy as an antiviral therapy for chronic hepatitis is performed as a standard treatment. And this efficiency rate is getting increased.

However, the side effect of antiviral therapy is diverse, sometimes serious psychiatric and neurological abnormalities (insomnia, depression) to be expressed and it will force to suspend the treatment. Previously, we examined the dynamics of brain metabolism in patient with cirrhosis by using PET, MRI, MRS and various fields. We found out the glucose metabolism in the brain of patient with cirrhosis is depressed as compared to control.

Thus our AIM is to clarify the relationship between the glucose metabolism in the brain and the psychiatric and neurological dysfunction in cases of PEG-IFN and ribavirin combination therapy.

**METHODS:** We examine PET imaging of the brain using 2-(18F)- fluoro-2-deoxy-D-glucose, Neurological test, Auditory brain stem reaction and electroencephalogram, cytokine measurements in blood ,biochemical test in blood (peripheral blood, liver function and viral load) before antiviral therapy and 3 month after from the start of the therapy, 12month after (the therapy is finished),24month after(observation period).

And after the measurement, We analyzed the relationship between the various tests and other mental dysfunction and the glucose metabolism in the brain.