

# **ROLE OF DIFFERENT CT TECHNIQUES IN GRADING OF LIVER FIBROSIS IN VIRAL HEPATITIS PATIENTS**

By

**Abd Allah Abbass Abd Elfatah**  
MB.BCh, M.Sc

**Thesis**

Submitted For Partial Fulfillment of the MD Degree  
*of Radiodiagnosis*

**Radiodiagnosis department  
Faculty of medicine  
Fayoum university**

**2016**

# **ROLE OF DIFFERENT CT TECHNIQUES IN GRADING OF LIVER FIBROSIS IN VIRAL HEPATITIS PATIENTS**

By

**Abd Allah Abbass Abd Elfatah**

MB.BCh, M.Sc

**Thesis**

Submitted For Partial Fulfillment of the MD Degree  
*of Radiodiagnosis*

*Supervised by*

**Professor Dr. Mohamed Abd Elatef Mahmoud**

Professor of Radiodiagnosis  
Faculty of Medicine – Fayoum University

**DR. Mohamed Ahmed Saad**

Assistant Professor of Radiodiagnosis  
Faculty of Medicine – Fayoum University

**DR. Ahmed Ali Goma**

Assistant Professor of Tropical Medicine  
Faculty of Medicine – Fayoum University

**Radiodiagnosis Department**

**Faculty of Medicine**

**Fayoum University**

**2016**

## **ABSTRACT**

**Purpose of study:** This study aims to evaluate the role of perfusion CT in grading of liver fibrosis, seeking for a simple tool that may be helpful in evaluation of a very common problem.

**Patients and methods:** Fifty one hepatitis C patients applying for Egyptian ministry of health antiviral therapy (Peginterferon alfa-2b 1.5 mcg/kg weekly + Ribavirin 800 mg daily) were included in the study. All the group were subjected to the routine clinical assessment, lab and imaging protocol. Lab assessment included CBC, ALT, AST, liver and kidney function tests, HBsAg, HCV Ab, HCV PCR, abdominal ultrasound, and true cut liver biopsy. Perfusional CT scan was added and perfusional parameters was calculated.

**Results:** These results show that each of portal perfusion, total hepatic perfusion and transit time can be used to differentiate mild from moderate liver fibrosis. The best single factor was portal hepatic perfusion. Using portal hepatic perfusion value of 102 ml /min/100ml showed a sensitivity of and specificity of 83%. At this value efficiency of the test is about 80%. Results showed correlation between degree of steatosis and the precontrast standard deviation of density of selected hepatic region. A parameter which probably compares the density of hepatic parenchyma with the internal minute portal tracts.