



Cystic Fibrosis Research News

Title:

Controlled attenuation parameter: a measure of hepatic steatosis in patients with Cystic Fibrosis

Authors:

Razan M. Bader^a, Maureen M. Jonas^b, Paul D. Mitchell^c, Shanna Wiggins^b, Christine K. Lee^b

Affiliations:

^aMulti Organ Transplant Center, King Fahad Specialist Hospital, Dammam, Saudi Arabia,

^bDivision of Gastroenterology, Hepatology, and Nutrition, Boston Children's Hospital, Boston, MA

^cInstitutional Centers for Clinical and Translational Research, Boston Children's Hospital, Boston, Massachusetts.

What was your research question?

The aim of this study was to determine if an ultrasound-based tool, Controlled Attenuation Parameter (CAP) measured by a transient elastography machine (which assesses the stiffness of the liver via the technique of transient elastography), can detect liver fat in people with cystic fibrosis (CF) at Boston Children's Hospital. We also wanted to study if CAP measurements were different in patients with different degrees of liver disease.

Why is this important?

Liver disease is a major factor causing significant medical issues in people with CF. Liver fat is a sign of liver disease in CF. Unfortunately, because liver disease does not often have symptoms, diagnosis is sometimes made when there is already advanced liver disease.

What did you do?

We measured CAP in people with CF at Boston Children's Hospital (age 6-25 years) from January 2013-March 2014. We categorized the individuals into 3 groups - CF with no liver disease, CF with liver disease (CFLD) and CF with liver disease and portal hypertension (when there is an increased pressures in a major vessel entering the liver which is a sign of advanced liver disease).



Cystic Fibrosis Research News

What did you find?

A total of 129 individuals were studied. The CAP measurement was normal in 67% of individuals. Of those with abnormal CAP measurements, 27% were in those categorized with no CFLD, 48% in those with CFLD and 20% in those with CFLD and portal hypertension. Other than changes in a blood test for bilirubin, there were no other medical factors associated with the CAP measurement.

What does this mean and reasons for caution?

CAP is a useful tool to measure liver fat in people with CF.

What's next?

Larger studies in children with CF over a longer period of time will help us determine if CAP, measured by transient elastography, can help find liver disease earlier than current methods.

Original manuscript in PubMed

<https://www.ncbi.nlm.nih.gov/pubmed/?term=Controlled+attenuation+parameter%3A+a+measure+of+hepatic+steatosis+in+patients+with+Cystic+Fibrosis>