

HEPATITIS

HCV viremia correlates negatively with serum levels of cystatin C

Treatment-naive children with chronic HCV infection but low viremia have higher serum levels of cystatin C than children with moderate viremia, according to a team from Egypt.

“HCV infection is a worldwide problem,” explains corresponding author Mostafa Sira, “but current available treatment regimes have unsatisfactory success rates.” Previous work has indicated that cysteine proteases of the HCV particle could be therapeutic targets, so the authors have investigated whether there is a link between serum levels of cystatin C and viremia in children with HCV infection.

The researchers measured serum levels of cystatin C in 27 children (aged 3–18 years) who had chronic hepatitis C and 25 healthy controls matched for age and sex. Liver function, histopathological parameters and hepatitis C viral load were also determined.

Serum levels of cystatin C were higher in the children with hepatitis C than in

those without the infection, and were higher in those with low viremia than in those with moderate viremia. Serum levels of cystatin C did not correlate with histopathological findings or serum levels of transaminases. The authors suggest that cystatin C might have an inhibitory effect on HCV replication and therefore that cystatin C could be used as a therapeutic agent in patients with hepatitis C.

Sira and colleagues plan to determine whether cystatin C could be used therapeutically in cell culture and animal models. If these findings are favorable, they hope to proceed to clinical trials in humans.

Claire Greenhill

Original article Behairy, B. E. *et al.* Serum cystatin C, a cysteine protease inhibitor, correlates negatively with viral load in treatment-naive children with chronic hepatitis C. *J. Pediatr. Gastroenterol. Nutr.* doi:10.1097/MPG.0b013e31823e98c2