depressive and anxiety symptoms using the HAD questionnaire and fasting lipid profiles were measured at each study visit. Significant depression and anxiety was defined as HAD-D ≥8 or HAD-A score ≥8.

Results At screening 40% had significant anxiety and 21.7% had significant depression. Depression was more frequent in HCV genotype 3 than other genotypes (31.6% vs 17.1%). Depressed patients had significantly lower serum apolipoprotein E level (30 mg/l vs 39 mg/l, p=0.029 – normal range 36–42 mg/l) than those that were not depressed and tended to have lower total cholesterol (3.8 vs 4.4 mmol/l, p=0.053). There was no difference in apolipoprotein B (0.67 g/l vs 0.78 g/l, p=0.136 – normal range 0.6–1.2 g/l).

There was no improvement in depression with any lipid modulating combination. One HCV G3 non-responder discontinued because of worsening depression after 4 weeks of combination treatment when cholesterol was 2.3 mmol/l, and both apoB and apoE were below the normal range (0.3 g/l and 10 mg/l respectively). At screening, there was no correlation of anxiety with HCV genotype or lipid profiles. There was a trend towards improvement in anxiety in the Omacor / Fluvastatin combination group and Omacor alone but no change in the Fluvastatin group.

Conclusion In the brain apoE particles deliver cholesterol to neurons via lipoprotein receptors. ApoE is important in the HCV lifecycle and several studies have detected HCV in the brain. This study shows low serum apoE levels are associated with depression in CHC. Lipid lowering therapies should be used with caution in hypolipidaemic CHC patients.

Competing interests None.

Keywords anxiety, apolipoprotein E, cholesterol, depression, hepatitis C Virus.

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DEPRESSION IN CHRONIC HEPATITIS C IS ASSOCIATED WITH LOW APOLIPOPROTEIN E LEVELS

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Introduction Depression and anxiety are prevalent in patients with chronic hepatitis C (CHC) and exacerbation during antiviral treatment adversely effects compliance and treatment response. HCV affects cholesterol metabolism which is critical for cognitive function.

We evaluated depression and anxiety in CHC, the relationship with lipid profiles and the effect of a 12-week course of lipid-modulating therapy.

Methods A pilot study was performed in non-responders to standard of care. Patients were randomised to low or high dose n3-PUFAs (Omacor) alone or in combination with Fluvastatin in a factorial design. Participants (N=60) had assessment of