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Obstructive sleep apnoea severity and liver steatosis measured by magnetic resonance imaging

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In patients with OSA and metabolic comorbidities, liver steatosis measured by magnetic resonance imaging is associated with male sex and insulin resistance, but not with OSA severity and nocturnal hypoxia <http://bit.ly/2kqyi3O>

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To the Editor:

Obstructive sleep apnoea (OSA) and non-alcoholic fatty liver disease (NAFLD) are two of many diseases associated with obesity. NAFLD is a common condition ranging in severity from liver steatosis to non-alcoholic steatohepatitis and liver fibrosis, the last step of NAFLD progression. Numerous studies have investigated whether the frequent co-occurrence of OSA and NAFLD simply reflects their link to obesity, or whether there is an independent pathophysiological interconnection between the two diseases (see [1] for comprehensive review). In animal models, intermittent hypoxia mimicking OSA has been shown to cause insulin resistance, dysfunction of key steps in hepatic lipid metabolism, liver steatosis and fibrosis [1]. In the clinical setting, the increased burden of chronic liver disease and the practical limitations of using liver biopsy has led to the development of serum- or imaging-based non-invasive tests, allowing reliable detection and quantification of liver steatosis and fibrosis [2]. Our group has recently reported that severe OSA is independently associated with increased liver stiffness, a validated marker of liver fibrosis, in patients with metabolic comorbidities [3]. In the same clinic-based cohort, we aimed to determine whether OSA severity is also independently associated with liver steatosis, the first step of NAFLD. We used

magnetic resonance imaging (MRI), which is considered as the gold standard for non-invasive assessment of liver steatosis according to current European guidelines [4].