Fatty liver as a radiological incidental finding in the Emergency Department: an opportunity to lessen a growing burden on the health care system

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Dear Editor,

Emergency Departments (EDs) are becoming increasingly busy with various types of presentations. Radiology provides one of the main resources for diagnostic tests in the ED and has seen a significant increase in its utilization over the last two decades, predominantly computed tomography (CT). The use of diagnostic imaging has led to improvements in clinical diagnostic certainty, length of stay, disposition to appropriate specialist care and initiation of treatments, but has also led to an increase in incidental findings.(1)

The majority of radiological incidental findings relate to focal lesions in different body parts. Clear guidelines for work-up and follow-up are available to both radiologists and clinicians. Diffuse or generalized pathophysiological findings can also be discovered incidentally on imaging. Such findings include fatty liver, visceral and subcutaneous adiposity, arterial calcifications, abnormal muscle mass and bone density amongst others. Fatty liver is increasingly encountered on imaging and, while still under-reported by radiologists, represents a common finding on radiology reports encountered by emergency physicians and other clinicians.(2,3) We conducted a retrospective study of unenhanced CT studies performed for renal colic for 1,290 patients in a tertiary emergency department in Melbourne, Australia. Approximately 26% of patients had fatty liver with only 28% of the reports for these patients documenting fatty liver.(2)

Importance of fatty liver:
The aetiology of fatty liver is often unknown to the reporting radiologist when such a finding is encountered. Whether it relates to non-alcoholic fatty liver disease (NAFLD) or another secondary cause, its presence is clinically important. Non-alcoholic fatty liver disease is defined as an accumulation of fat in a liver, confirmed on biopsy or imaging, in the absence of secondary causes of fat accumulation such as significant alcohol intake. It represents a spectrum of liver disease ranging from simple fatty liver through to non-alcoholic steatohepatitis (NASH), and if not monitored, NASH-related cirrhosis and ultimately hepatocellular carcinoma and/or liver failure. Moreover, NAFLD, including simple fatty liver, is associated with metabolic syndrome and cardiovascular outcomes beyond the known traditional risk factors. Incidental fatty liver due to NAFLD is thus a finding with both clinical and socioeconomic importance that deserves recognition and follow-up to identify, risk-stratify and potentially prevent significant consequences.

What do emergency physicians think about fatty liver?

To better understand perspectives on incidental findings and specifically fatty liver, we conducted an electronic survey in 2018 distributed to members of the Australasian College of Emergency Medicine. The aim was to inform radiologists on what emergency clinicians considered relevant in this topic and how such a finding was regarded in the radiology report. There were 236 respondents in the study. More than half of the respondents (60.2%) reported that they would like fatty liver to be mentioned in a CT report while 29.7% reported that it was irrelevant in the emergency setting and 10.2% reported that they did not want it mentioned in the report (Supplementary Material).
Conclusion:

Most emergency clinicians identify fatty liver as an issue better addressed by the General Practitioner (GP) in a community setting rather than in an overcrowded, resource-poor ED. Documenting fatty liver in the discharge summary and recommending further assessment (such as alcohol intake, cardiovascular risk and liver function tests) therefore, might be the only additional step required in this setting. This is certainly dependent on the clinical setting for the patient and is not necessarily applicable to all circumstances. As documentation of fatty liver in a radiology report for a patient presenting to ED may not be sufficient to initiate appropriate risk assessment and investigations by GPs, ED physicians can take a small but significant role to address this public health issue.

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