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► To cite this version:

Lionel Arrivé, Ramiro Orta, Nikias Colignon, Sanaa El Mouhadi, Yves Menu. Letter to the Editor: Acute extrahepatic infectious or inflammatory diseases are a cause of transient mosaic pattern on CT and MR imaging related to sinusoidal dilatation of the liver. *European Radiology*, 2016, 26 (12), pp.4325 - 4326. 10.1007/s00330-016-4295-5 . hal-01400038

HAL Id: hal-01400038

<https://hal.sorbonne-universite.fr/hal-01400038>

Submitted on 21 Nov 2016

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Letter in reply

Letter to the Editor: Acute extrahepatic infectious or inflammatory diseases are a cause of transient mosaic pattern on CT and MR imaging related to sinusoidal dilatation of the liver

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1 We read with great interest the article by Doctor Ronot and colleagues in the recent issue of
2 European Radiology about the transient mosaic pattern observed on CT and MR imaging in
3 acute extrahepatic infection or inflammatory disease (1). They nicely demonstrated that acute
4 diseases of extrahepatic organs were associated with a reversible hepatic sinusoidal dilatation
5 resulting in a mosaic enhancement pattern on contrast-enhanced CT or MR imaging.
6 However, we were surprised that other hepatic imaging features such as periportal halo or
7 gallbladder wall thickening were not mentioned. Basically, it is uneasy to estimate the
8 frequency of such hepatic abnormalities in patients with acute extrahepatic infection
9 condition.

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12 Han GH et al reported 46 patients with hepatobiliary changes from a group of 157 patients
13 with acute pyelonephritis (2). They found 46 patients (29%) with early inhomogeneous
14 hepatic enhancement, 15 patients (10%) with periportal low density halo and 6 patients (4%)
15 with gallbladder wall thickening (2). Zissin et al. reported a gallbladder wall thickening in 19
16 of 33 patients (58%) with acute pyelonephritis, a periportal hypodense halo in 17 (51%)
17 patients and a congested liver in 3 (9%) patients (3). Vollmann R. et al reported 29 patients
18 (11%) with a periportal hypodense halo from a group of 274 patients with acute
19 pyelonephritis (4).

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22 In our own experience we analyzed the results of contrast-enhanced CT at portal phase in 19
23 patients with various extrahepatic infectious conditions exhibiting hepatic abnormalities.
24 Hepatic abnormalities included periportal hypodense halo in 18, a transient mosaic pattern in
25 14 and a gallbladder wall thickening in 6 of the 19 patients (Fig. 1). Respective frequencies of
26 hepatobiliary changes observed in patients with extrahepatic infectious conditions appear to
27 be markedly variable. Such differences may be explained by many differences between
28 published studies including severity and nature of primary extrahepatic infectious condition,
29 characteristics of contrast-enhanced CT scan (i.e. arterial vs portal phase) and retrospective
30 design of studies with marked variability of inclusion criteria. As Doctor Ronot and
31 colleagues, we believe that such various hepatobiliary changes related to extrahepatic
32 infections condition should be recognized to avoid misdiagnosis with primary hepatic disease
33 such as acute hepatitis, cholangitis or cholecystitis.

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44 diseases are a cause of transient mosaic pattern on CT and MR imaging related to
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55 an extrarenal manifestation of acute pyelonephritis. *Abdom Imaging* 2011;36:557-560
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Figures legends:

Figure 1: 21-year old man with severe enterobacter cloacae colitis. Mosaic enhancement pattern and periportal low density halo are well demonstrated in transverse plane (a). A marked thickening of gallbladder wall is demonstrated in frontal plane (b). Follow-up CT scan one month later (not shown) was normal.

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No conflict of interest.