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The Cluster Sign

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The cluster sign is a radiological finding associated with pyogenic liver abscesses that better appreciated on contrast-enhanced CT and MRI images. It was first described by Jeffrey et al. in 1988 [1].

On CT scan (Figure 1), the cluster sign manifests as a hypoattenuating lesion consisting of smaller aggregating cystic formations, which demonstrate peripheral enhancement on post-contrast imaging. On MRI, the smaller cystic formations cluster together, appearing hypointense on T1-weighted images and hyperintense on T2-weighted images, with rim enhancement noted on post-gadolinium images.



Figure 1: Axial CT image of the abdomen with intravenous contrast of a 50-year-old diabetic man admitted with acute pain in the right hypochondrium and fever, showing a hypoattenuating lesion consisting of smaller aggregating cystic lesions (red arrow) with a minimal peripheral enhancement.

The main differential diagnoses of the liver cluster sign include cystic metastasis and biliary cystadenocarcinoma [2].

References

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