

# VARICELLA HEPATITIS: A RARE CASE OF IMAGED HEPATIC INVOLVEMENT

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## CASE HISTORY

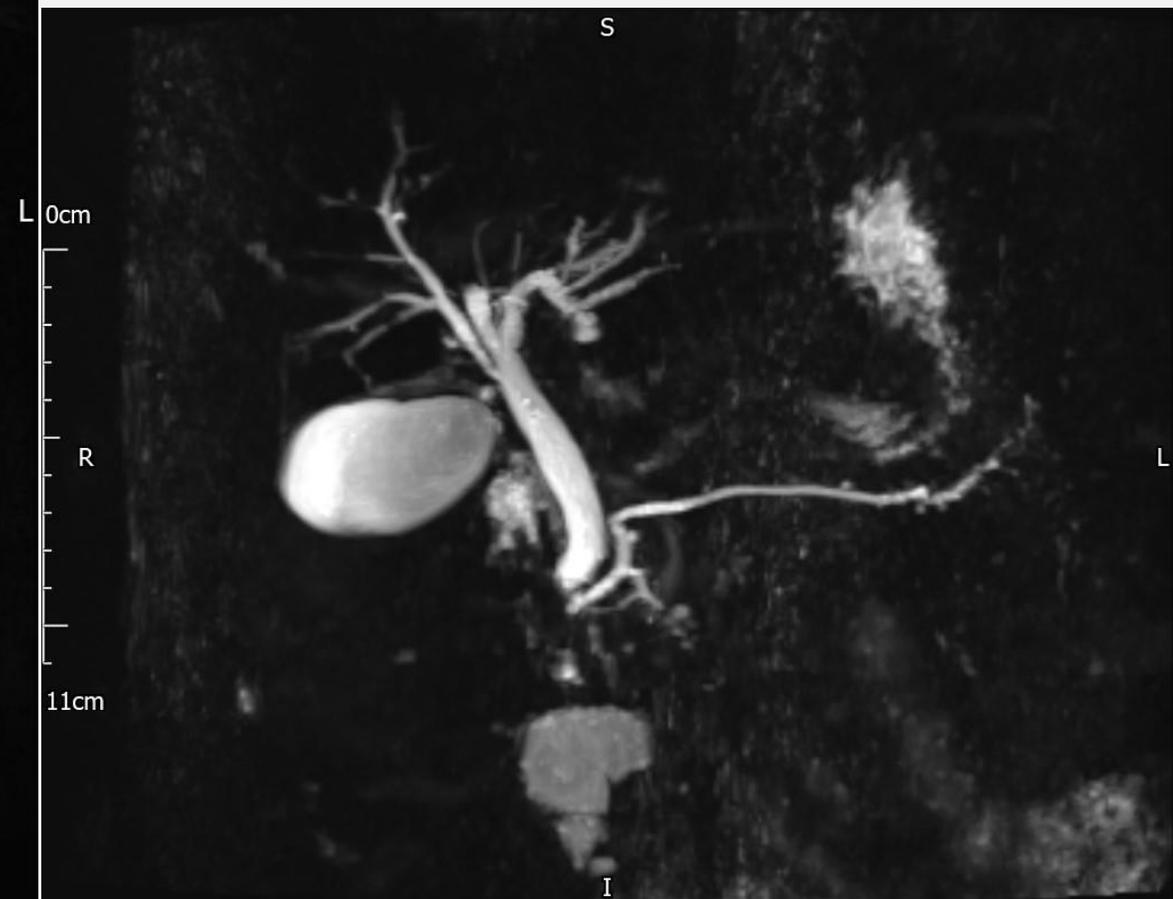
- A 67-year-old male was admitted with 48 hours of worsening abdominal pain and nausea.
- He had a past medical history of lymphoma for which he was no longer on active treatment.
- His LFTs, amylase and inflammatory markers on admission were normal (ALT 42, ALP 92, CRP 16)
- He had significant RUQ tenderness on examination.



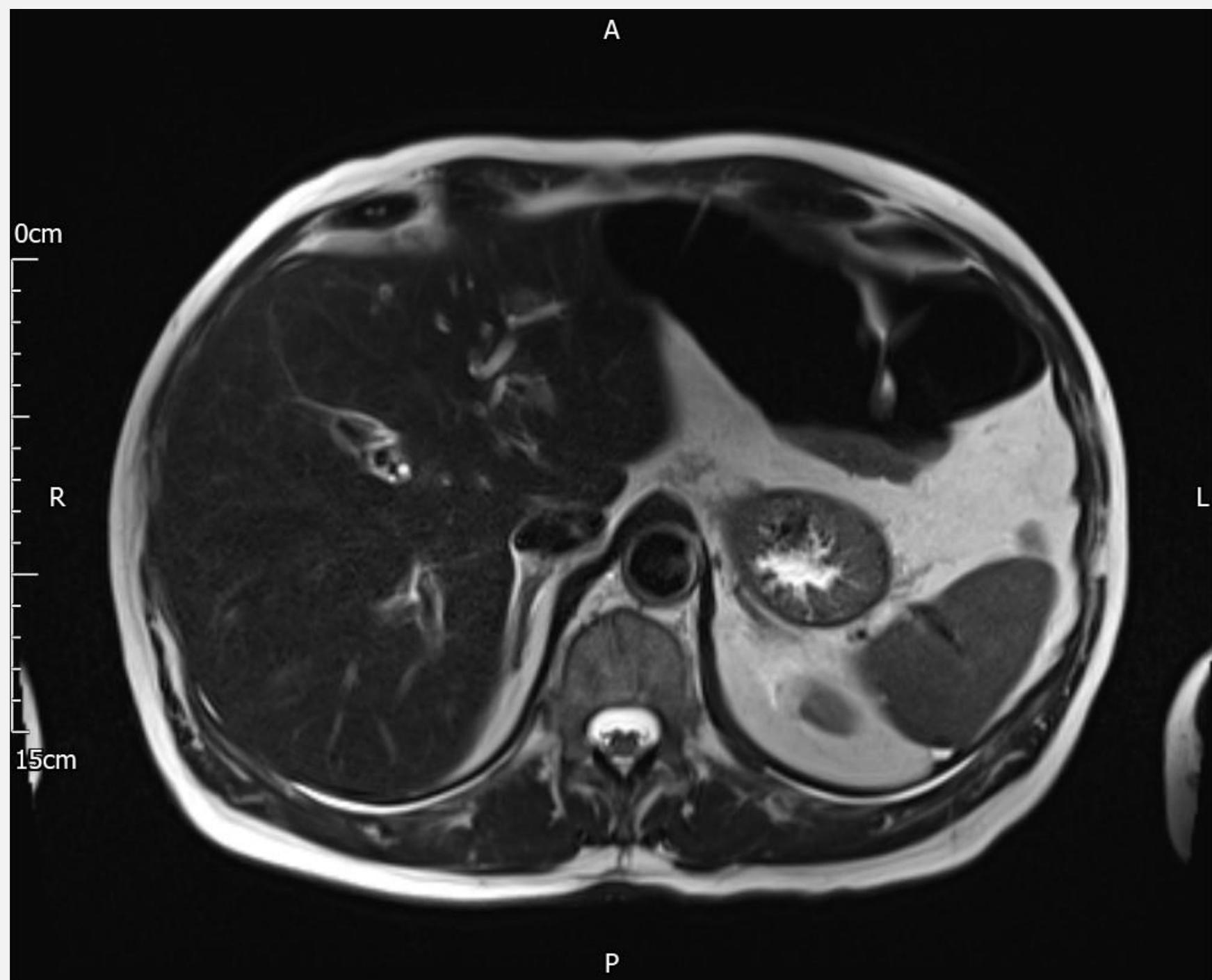
A portal venous CT abdomen pelvis performed on admission demonstrated some mild CBD dilatation, but an otherwise normal liver.



On MRCP, there was seen to be intra and extrahepatic biliary dilation; the CBD measured 11 mm but tapered to the ampulla with no filling defects.



The liver parenchyma appeared unremarkable on T2 weighted sequences.





## DIAGNOSIS OF VARICELLA ZOSTER VIRUS

- Several days later the patient, who was still complaining of abdominal pain, developed a rash.
- This began on his neck but progressed to the back and abdomen with papular eruptions.
- A viral swab confirmed Varicella Zoster Virus (VZV) detected by PCR.
- Treatment was commenced with IV acyclovir.



A second CT was performed for ongoing abdominal pain and worsening LFTs (ALT 512, ALP 1,213, CRP 92).

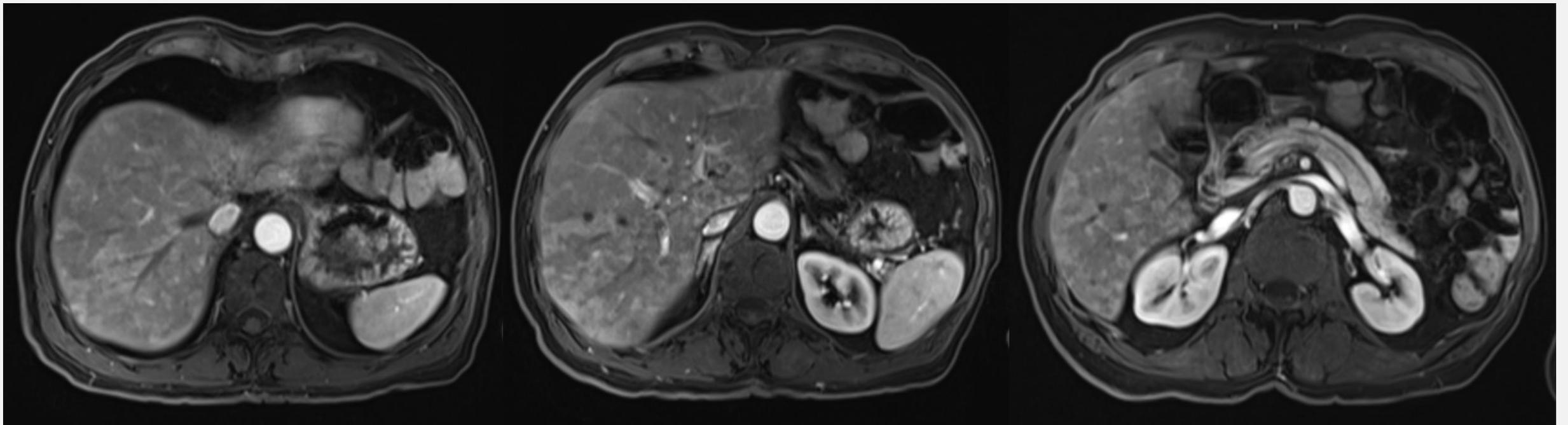
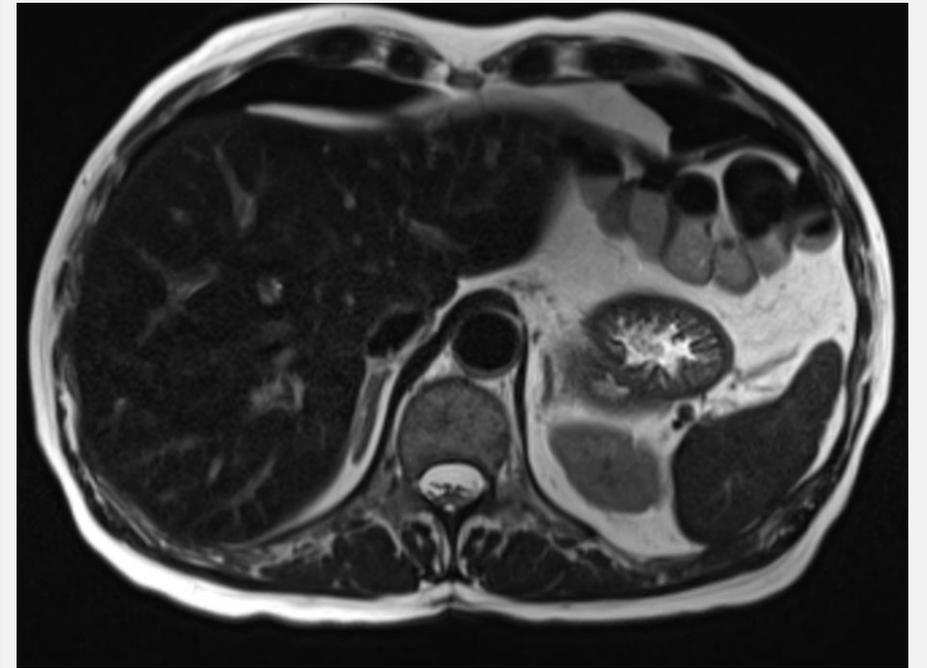
There were found to be new, ill defined areas of low attenuation throughout the liver, which looked increasingly granular.

It was thought these could be evolving liver abscesses.

A second liver MRI was performed for evaluation of the liver lesions.

The liver appeared of low T2 signal compared to the previous MRCP. It contained small cysts but no liver abscess.

There was abnormal, diffusely irregular enhancement of the liver, most obvious on the arterial phase. There were also irregular linear areas which did not enhance, most conspicuous on the portal venous phase.



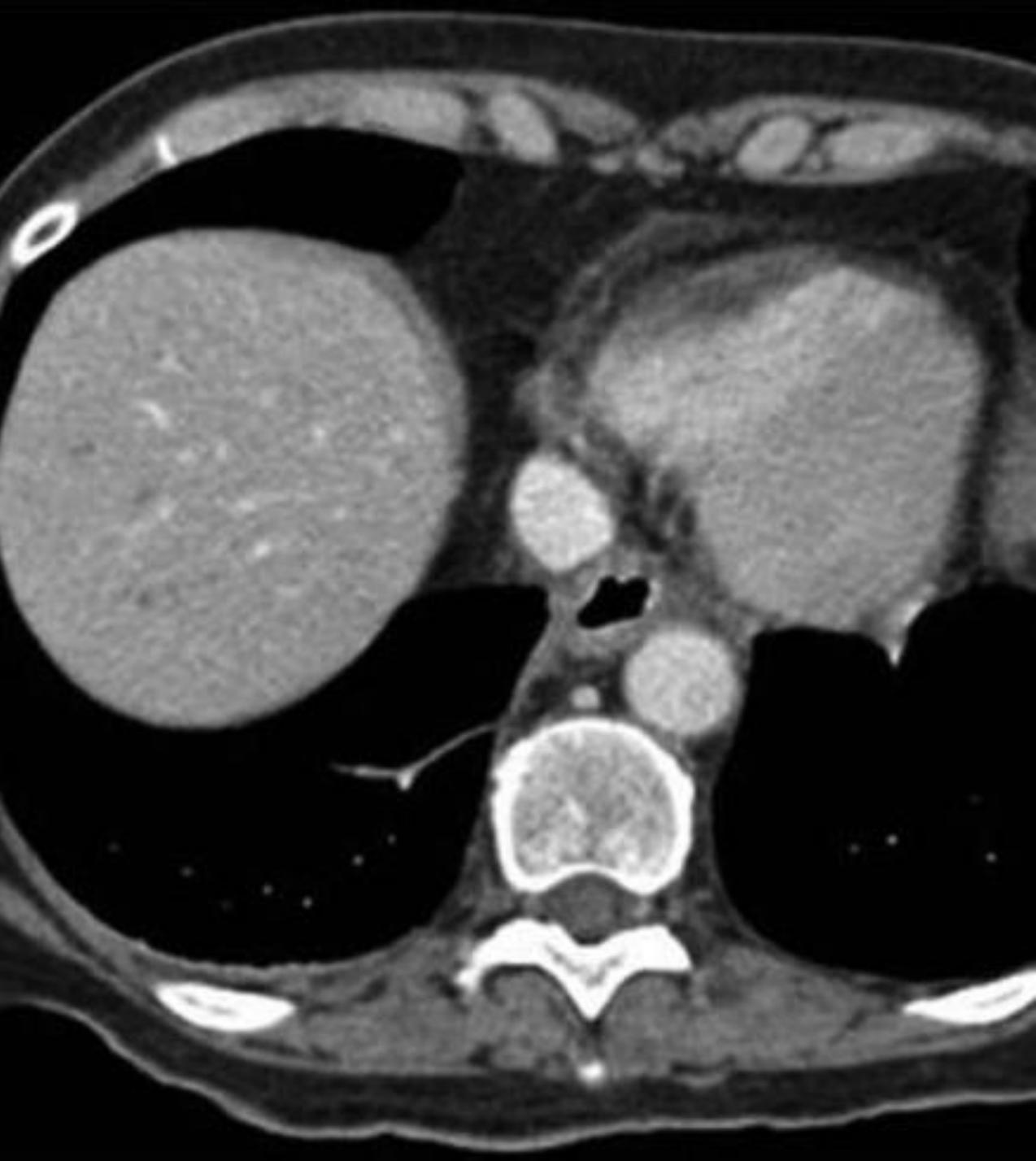
## FOLLOW UP

- Liver MRI performed 4 months later demonstrated resolution of the heterogenous enhancement of the liver with only a few residual hypo-enhancing foci. The patient was discharged.



# VARICELLA ZOSTER VIRUS

- VZV usually causes a self-limiting illness but can be lethal in patients with immunodeficiency.
- VZV is a member of the herpes virus family.
- Infection has a predilection for the liver.
- Infection can range from mild hepatitis to fulminant liver failure
- It can manifest as generalised abdominal pain. The associated skin rash can occur synchronously or follow by several weeks



## IMAGING FEATURES OF VZV

- There are scant reports in the literature
- VZV on CT has been described as multiple small hypodense liver nodules with ill-defined margins, as was seen in this case.
- Follow up imaging has shown resolution of the liver lesions where patients have responded to therapy

Shah & Saini (2011), axial CT showing numerous 2-4 mm ill-defined low attenuation lesions in the liver with no enhancement, in a patient with VZV

## DIFFERENTIAL DIAGNOSIS FOR MULTIPLE LOW ATTENUATION LIVER LESIONS

- Pyogenic abscesses > well defined, low attenuation, enhancing margin
- Fungal infection > rim enhancement, periportal fibrosis, splenic involvement
- Lymphoma > lesions are often large
- Metastases and HCC > appearance can be variable

## REFERENCES

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- Ruehm SG, Trojan A, Vogt P, Krause M, Krestin GP. CT appearances of hepatic involvement in systemic varicella-zoster. *Br J Radiol.* 1998 Dec;71(852):1317-9. doi: 10.1259/bjr.71.852.10319009. PMID: 10319009.
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