

## Clinical vignette

# Polyarteritis nodosa with abdominal bleeding: imaging with PET/CT and angiography on the same day

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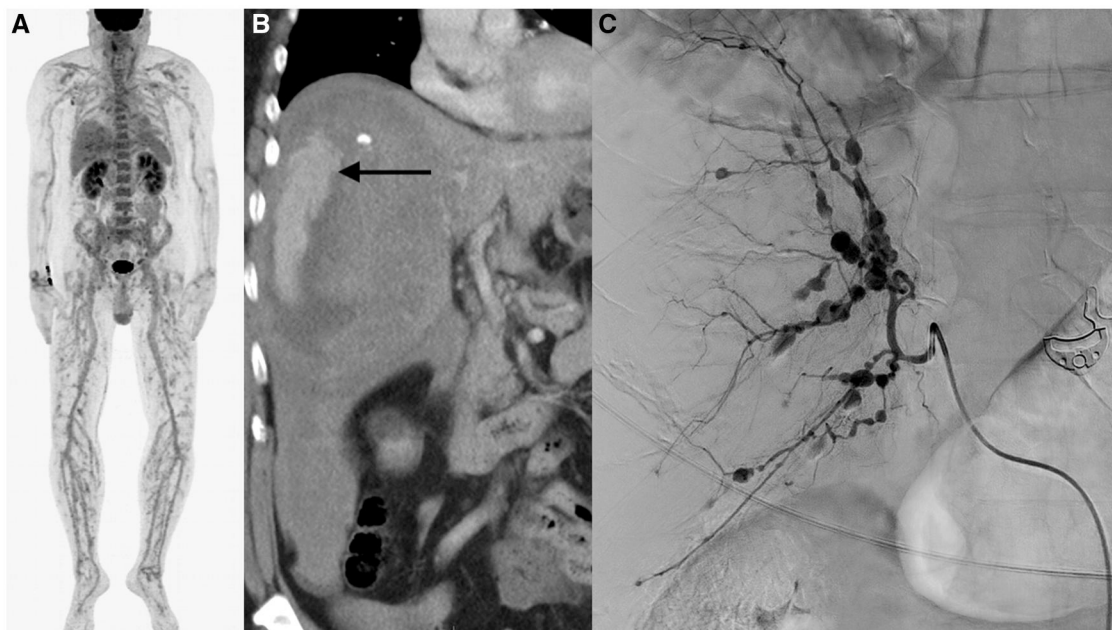
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A 59-year-old male with seropositive rheumatoid arthritis, hypertension and anticoagulation due to past pulmonary embolism was hospitalized for fever (39°C) and myalgia. His CRP level was 190 mg/l and he had haematuria and proteinuria, but infection screening and ANCA remained negative. One week after admission he experienced a sudden life-threatening abdominal catastrophe. <sup>18</sup>F fluorodeoxyglucose (FDG)-PET/CT was performed earlier on the same day, before the abdominal symptoms appeared. PET/CT detected increased FDG uptake in the peri- and intramuscular arterial tree of the lower extremities,

indicating vasculitis in middle-sized arteries, as well as inhomogeneous uptake in the liver (Fig. 1A). During the abdominal crisis, the CT scan showed haematoma and active bleeding of the right liver lobe (Fig. 1B). Digital subtraction angiography revealed multiple hepatic artery microaneurysms and stenoses (Fig. 1C). These findings were consistent with polyarteritis nodosa (PAN). He underwent successful emergency hepatic arterial embolization and was later treated with a molecular adsorbent recirculating system (MARS) for temporary liver failure. Immunosuppression was started with methylprednisolone



**Figure 1.** (A) PET/CT. The maximum-intensity projection shows increased FDG uptake in the peri- and intramuscular arterial tree of the lower extremities and inhomogeneous uptake in the liver. (B) CT of the abdomen, coronal view. Haematoma in the right lobe of the liver (arrow). (C) Angiography of the hepatic artery showing microaneurysms and stenoses

and cyclophosphamide. Hepatitis serology was negative. Subsequent genetic testing for *UBA1* and *ADA2* was normal.

In PET/CT, the linear hypermetabolic FDG uptake in the lower extremities resembles findings previously described in a small PAN patient series, confirming the importance of this observation [1].

### Data availability

All the relevant data to the clinical image have been shared. Additional information is available on reasonable request from the corresponding author.

### Funding

K.T. and L.P. have received state research funding from the Wellbeing Services County of Southwest Finland.

### Authors' contributions

Design, concept: all authors. Data collection, analysis: K.T., I.K., M.S., T.A. Clinical expertise: all authors. Writing manuscript: K.T., I.K., M.S., T.A. Manuscript review: all authors.

*Disclosure statement:* The authors have declared no conflicts of interest.

### Acknowledgement

Written informed consent was obtained from the patient.

### Reference

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