Insight into paraneoplastic vasculitis associated with adenocarcinoma colon on F18-FDG PET-CT

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Abstract

Paraneoplastic vasculitis is a rare entity usually seen in haematological malignancies. Its incidence is even more rare in solid tumours like breast, renal, colon and lung. F-18 FDG PET-CT is commonly used to differentiate between active vasculitis and atherosclerosis in patients with large to medium vessel vasculitis. We present a case of moderately differentiated adenocarcinoma colon presenting for the assessment of with paraneoplastic vasculitis.

Keywords: vasculitis, paraneoplastic syndrome, adenocarcinoma colon.
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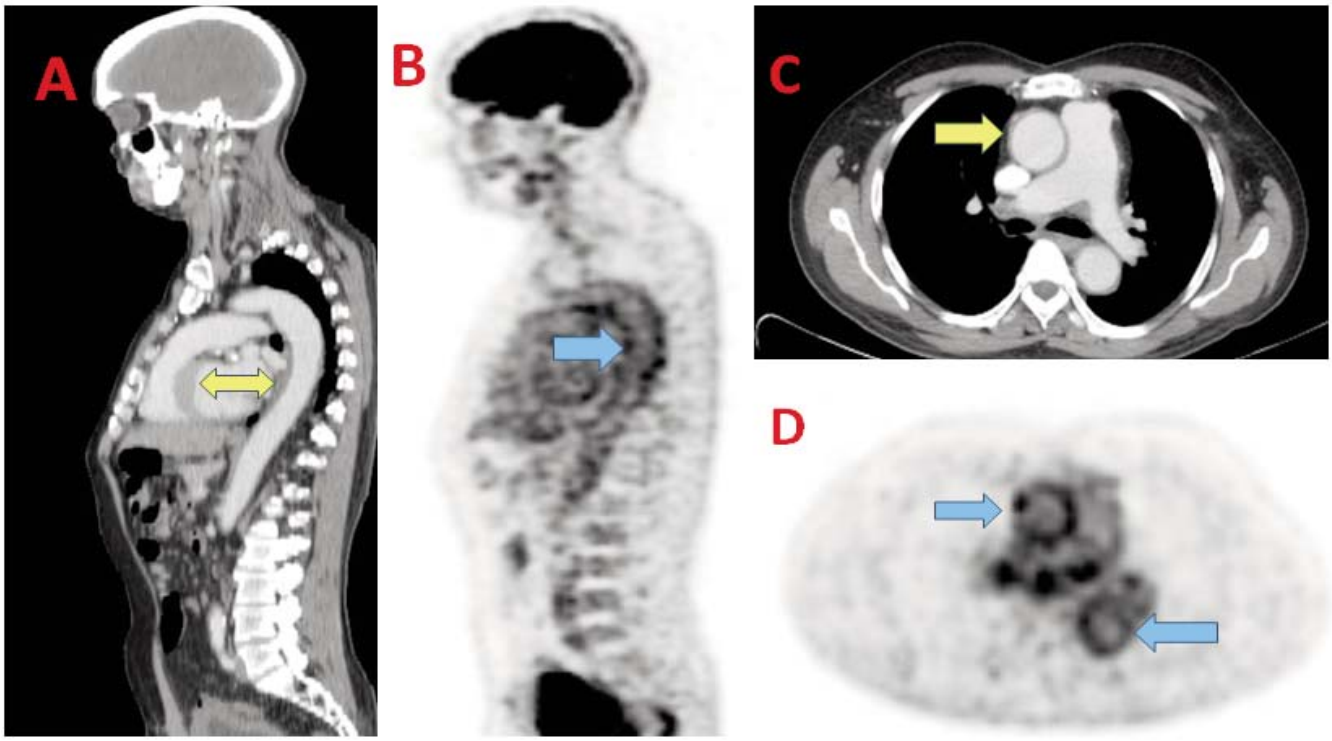

Figure: Image A and B are sagittal images of CT and PET component respectively and C and D are respective transverse images. Yellow arrows point to major vessel wall thickening and absence of calcification and blue arrows mark to corresponding FDG uptake on PET indicating vasculitis.

Discussion:

A 60-year-old male underwent staging CT for moderately differentiated adenocarcinoma colon. In addition to the expected finding of thickened bowel segment and regional lymphadenopathy consistent with known malignancy, there was generalized circumferential thickening of all the major vessels including aorta, common iliac, external and internal iliac arteries with no underlying vascular wall calcifications, therefore the possibility of atherosclerosis was ruled out. Inflammatory markers including erythrocyte sedimentation rate (ESR) and C-reactive protein were borderline raised. Since there was no previous history of vasculitis, the diagnosis of vasculitis secondary to paraneoplastic syndrome was entertained. F-18 FDG PET-CT was performed to assess for vasculitis.

FDG-PET scan is commonly used to differentiate between active vasculitis and atherosclerosis. It can also differentiate between active and inactive vasculitis. Medium and large vessel vasculitis can be evaluated with FDG PET-CT (Giant cell arteritis, Takayasu disease, polyarteritis nodosa.[1] Due to limited spatial resolution, small vessel vasculitis is difficult to characterise. Paraneoplastic vasculitis is rare occurring in about 2-5% of all cases of vasculitis.[2] To qualify for the diagnosis of paraneoplastic vasculitis, both vasculitis and malignancy should be diagnosed within a period of one month. It is commonly seen in breast, colon, renal and lung malignancy.[3] Treatment includes steroids. Although features of paraneoplastic syndrome settle with ongoing treatment of the primary malignancy, since it involves arteries (medium, large and small) and veins, FDG PET-CT is useful to monitor active stage of disease. PET-CT scan is an essential component in the workup of malignancy, it is important not to ignore ancillary findings which may help improve overall quality of life of the patient.

References

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