

FDG positron emission tomography of giant cell arteritis with polymyalgia rheumatica

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DESCRIPTION

An 80-year-old woman presented with low-grade fever, weight loss and shoulder ache persistent over 6 months. She had developed headache with scalp allodynia, though these had improved spontaneously within 2 months. Physical examination revealed an absent temporal artery pulse and decreased range of active shoulder motion. Laboratory findings showed a high erythrocyte sedimentation rate (73 mm/h). Temporal artery ultrasonography revealed no halo sign, stenosis or occlusion. Fluorodeoxyglucose positron emission tomography (FDG-PET) showed increased uptake in the thoracic aorta and carotid and subclavian branches, and bilateral shoulder, hip, and interspinal regions in the lower thoracic and lumbar spine (figures 1 and 2). Giant cell arteritis

(GCA) with polymyalgia rheumatica was diagnosed. Symptoms improved with prednisolone (30 mg/day).

GCA is associated with chronic vasculitis of large vessels, primarily the aorta and its main branches. It occurs in individuals aged >50 years. Polymyalgia rheumatica is closely linked to GCA, occurring in about 40–50% of patients. Headache is present in 90% of cases, frequently accompanied by scalp allodynia. In some cases, the inflammatory process may

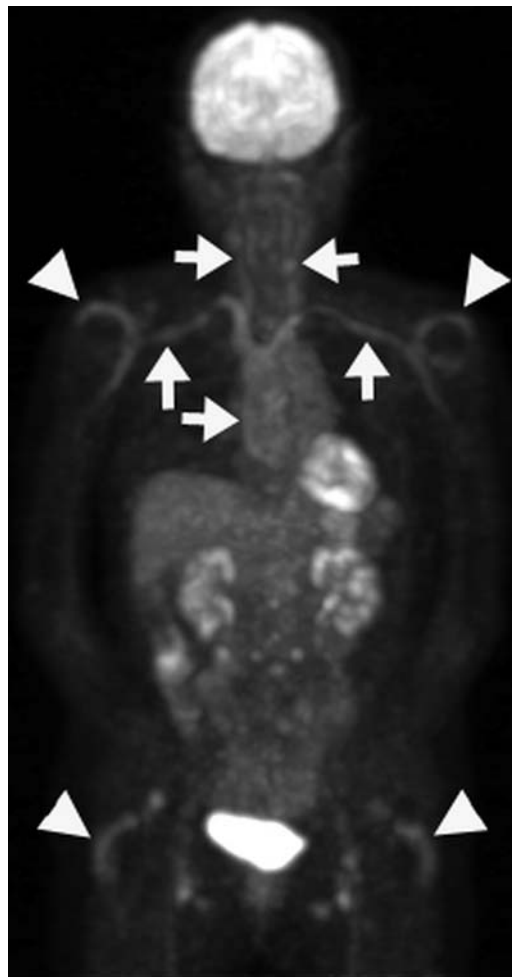


Figure 1 Fluorodeoxyglucose positron emission tomography image with arrows pointing towards abnormal uptake in the carotid and subclavian arteries as well as the thoracic aorta (arrows), and the bilateral shoulder and hip (arrowheads).

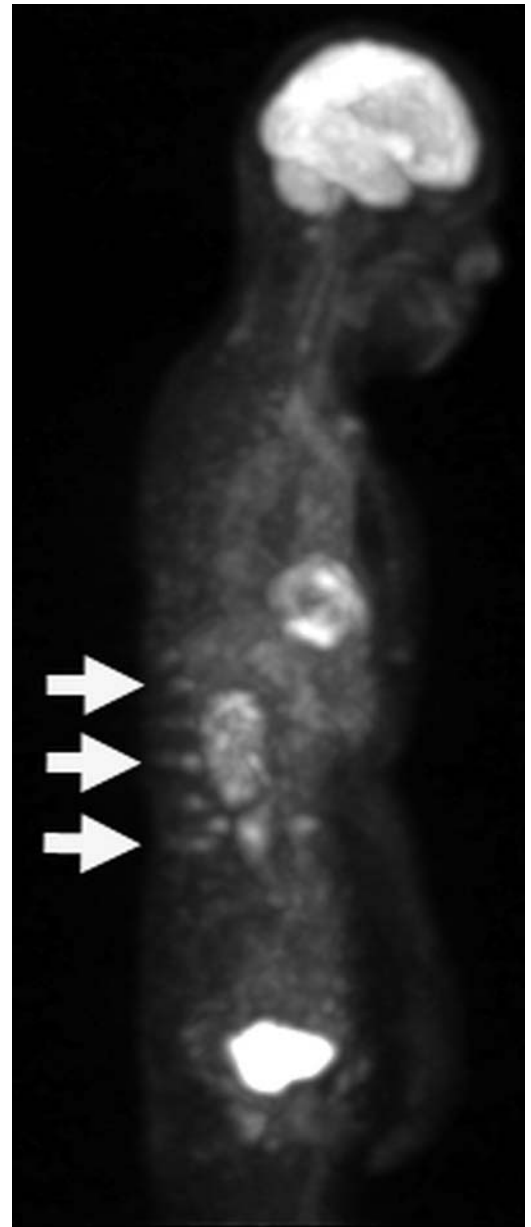


Figure 2 Fluorodeoxyglucose positron emission tomography image with an arrow pointing to abnormal uptake in the interspinal regions in the lower thoracic and lumbar spine (arrows).



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spontaneously become clinically silent,¹ requiring clinicians to evaluate symptoms by direct questioning.

Temporal artery ultrasonography, one of the non-invasive tests, is helpful in diagnosing giant-cell arteritis (sensitivity 88% and specificity 78%).² FDG-PET can be used to detect subclinical inflammation of large vessels in GCA.³ Although there is no perfect method for the diagnosis of GCA at present, FDG-PET may play a role in the management of GCA when the ultrasonography is negative.

Learning points

- ▶ Headache is present in 90% of giant cell arteritis (GCA) cases, frequently accompanied by scalp allodynia.
- ▶ The inflammatory process may spontaneously become clinically silent, requiring clinicians to evaluate symptoms by direct questioning.
- ▶ Fluorodeoxyglucose positron emission tomography may play a role in the management of GCA when the ultrasonography is negative.

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Contributors All authors were involved in managing the patient. KS wrote the first draft. MI edited the manuscript.

Competing interests None.

Patient consent Obtained.

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