

Incidental detection of a tenosynovial giant cell tumour of the thigh on [⁶⁸Ga]Ga-FAPI PET/CT: presentation of an unusual case.

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A 55-year-old male patient underwent [⁶⁸Ga]Ga-FAPI (fibroblast activation protein inhibitor) positron emission tomography/ computed tomography (PET/CT) due to persistent pulmonary symptoms after recovery from COVID-19 [1]. No increased pulmonary tracer uptake was found, however, as shown in A and C, focally increased [⁶⁸Ga]Ga-FAPI uptake was observed in a mass within the dorsal musculature of the left thigh. Tracer uptake colocalized with a sharply circumscribed, inhomogeneously contrast enhancing mass on MRI without relevant diffusion restriction (B).

Consequently, CT-guided percutaneous biopsies were taken and an aggressive angiomyxoma was suspected, a rare tumour predominantly affecting female patients, and typically occurs in the perineum or pelvis [2]. Although generally benign, this tumour grows infiltratively and is prone to recurrence.

Due to proximity to the sciatic nerve a complete resection of the tumour was performed in July 2021. The tumour showed a fine capsule with multiple layers encasing it. Subsequent to the operation, pathologic reassessment showed the definite diagnosis of a tenosynovial giant cell tumour (TGCT, D) which is absolutely rare in this location. TGCT is an unusual primary soft tissue tumour that is completely distinct from and should not be confused with any giant cell-rich tumour of bone or soft tissue. TGCT belong to the group of benign fibrohistiocytic tumours [3].

This report demonstrates the high sensitivity of [⁶⁸Ga]Ga-FAPI PET/CT to detect previously unknown tumours making it a promising test in cases of suspected tumour disease or in cancers of unknown primary [4].

Compliance with Ethical Standards:

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Informed consent: Informed consent was obtained from the patient reported in this case report.

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FIGURE

