

A Rare Extramedullary Presentation of Multiple Myeloma: Paraspinal Muscle Involvement Revealed by FDG PET/CT

Multipl Myelomannın Nadir bir Ekstramedüller Sunumu: FDG PET/BT ile Gösterilen Paraspinal Kas Tutulumu

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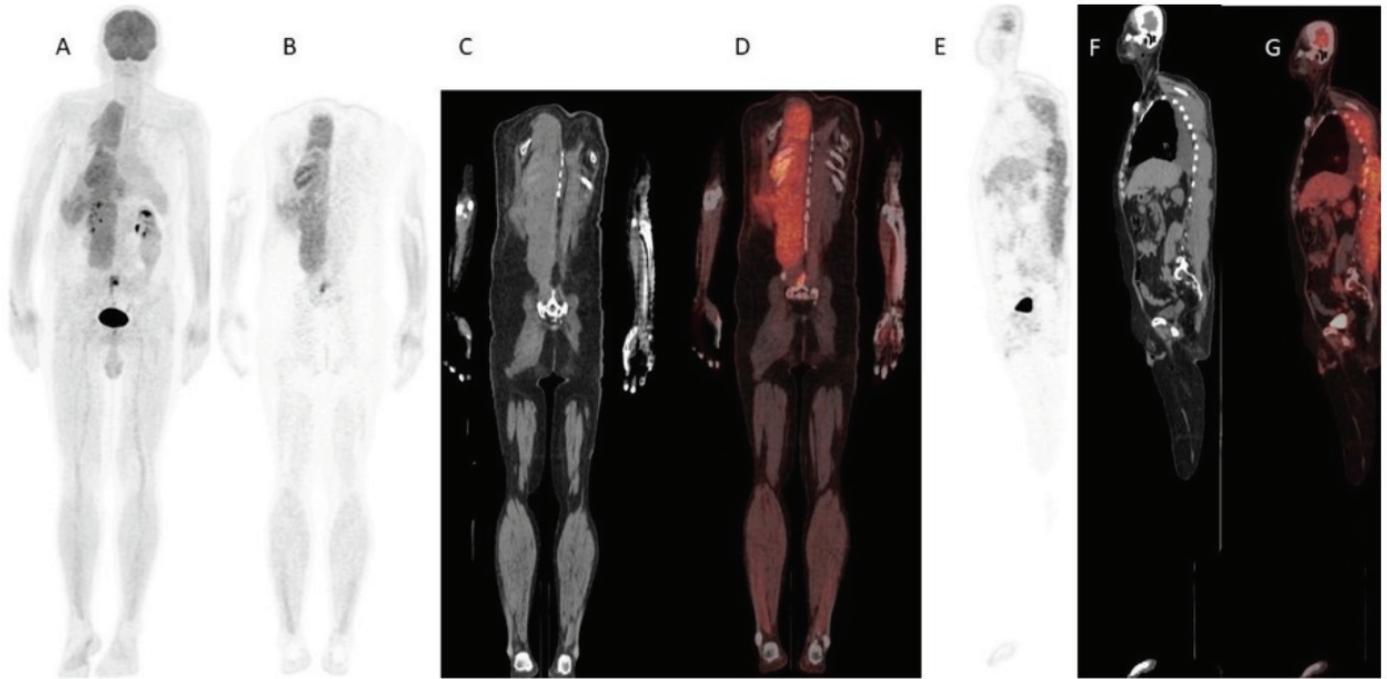


Figure 1. (A) Maximum intensity projection and (B) coronal PET, (C) coronal CT, (D) coronal fused and (E) sagittal PET, (F) sagittal CT, and (G) sagittal fused FDG PET/CT images demonstrate extensive and diffuse FDG uptake in paraspinal muscles.

FDG: Fluorodeoxyglucose, PET/CT: positron emission tomography/computed tomography.



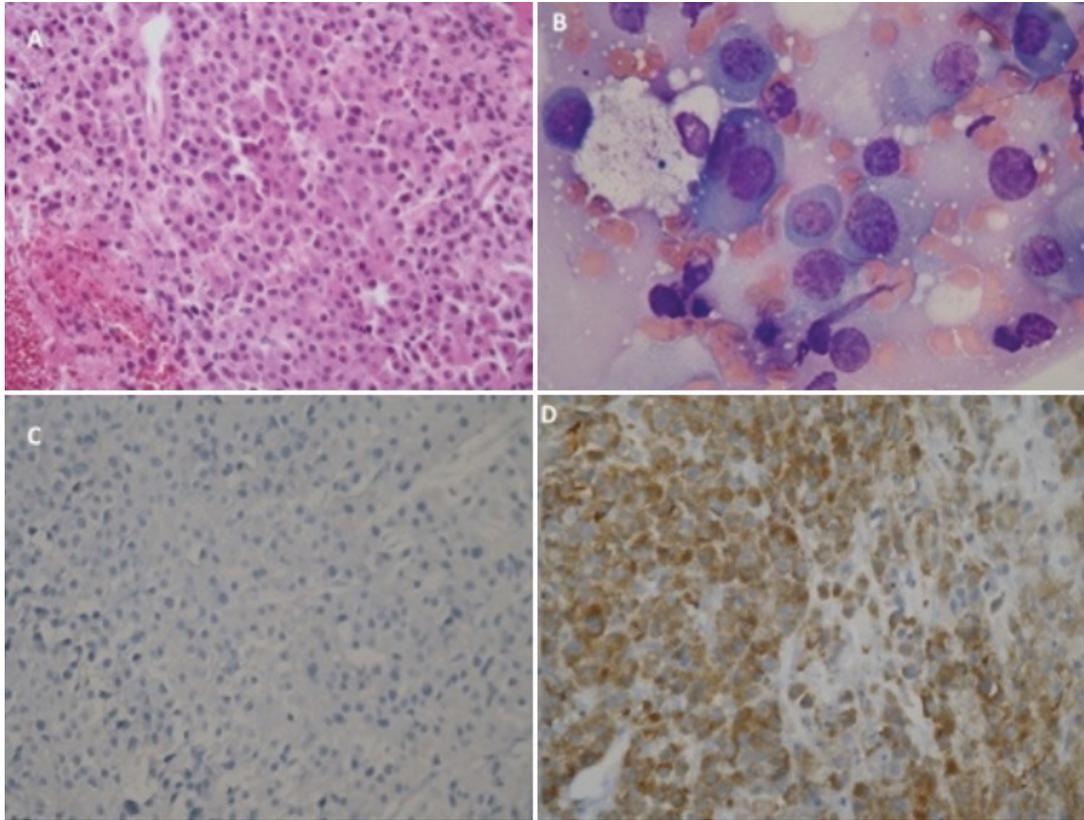


Figure 2. Microscopic examination revealing round monomorphic cells with vesicular and eccentric nucleus and immature plasma cells (A) (hematoxylin and eosin [H&E], 200 \times). High-power view shows plasma cells with basophilic cytoplasm, eccentric nuclei, and typical peripheral condensation of the chromatin (B) (H&E, 400 \times). Immunohistochemical staining showed that the tumor cells were negative for lambda (C) (magnification: 200 \times) and positive for kappa (D) (magnification, 400 \times).

A 51-year-old male with recurrent multiple myeloma (MM) was referred for positron emission tomography with 2-deoxy-2-[fluorine-18]fluoro-D-glucose integrated with computed tomography (18F-FDG PET/CT) to evaluate response to chemotherapy. 18F-FDG PET/CT showed diffuse markedly increased uptake in the right paraspinal muscles (Figure 1). Recurrence of kappa light chain myeloma was confirmed with diffuse infiltration of clonal kappa-positive plasma cells in the bone marrow. Ultrasound-guided biopsy of the paraspinal muscles and cytological analysis of closed-needle pleural biopsy revealed kappa monotypic plasma cell infiltration (Figure 2). Although radiotherapy targeting the paraspinal area was initiated, he was lost due to deep vein thrombosis and pulmonary embolism before radiotherapy could be completed.

Plasmacytomas mostly occur within or adjacent to the bone, but can also be found in soft tissues [1]. However, isolated intramuscular manifestation of MM is rare [2,3]. If detected, the most common location of presentation is paraspinal and the thigh muscles, followed by the iliopsoas and calf muscles. [3]. Studies have shown that FDG PET/CT can detect a larger

number of extramedullary plasmacytoma (EMP) sites compared to magnetic resonance imaging and it also has higher sensitivity and specificity for detecting EMP than intramedullary lesions in MM [3,4,5]. In this case, a rare presentation of extramedullary MM was successfully demonstrated by FDG PET/CT.

Keywords: Myeloma and other plasma cell dyscrasias, Positron emission tomography, FDG

Anahtar Sözcükler: Myeloma ve diğer plazma hücre diskrazileri, Pozitron emisyon tomografi, FDG

Ethics

Informed Consent: The patient's informed consent was received.

Authorship Contributions

Design: E.O., M.B.; Analysis or Interpretation: M.A., D.N., G.C.S.; Literature Search: M.A., D.N., G.C.S.

Conflict of Interest: No conflict of interest was declared by the authors.

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