Castleman's disease.Large retroperitoneal masses and multiple calcifications detected by ^{18}F-FDG PET/CT

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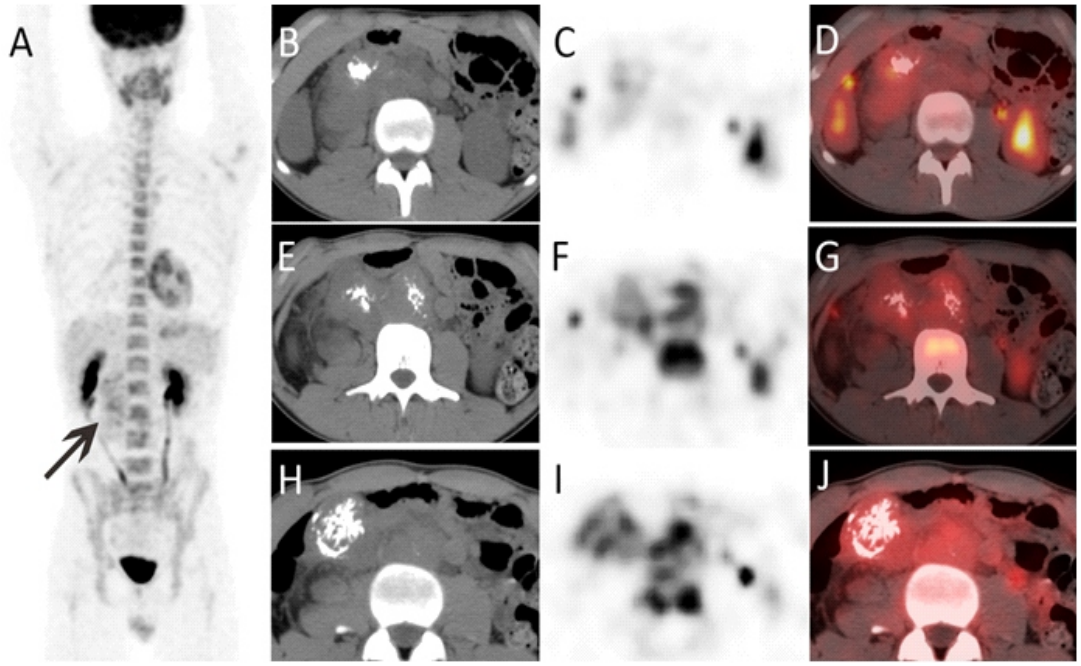

An 18 years old man was admitted to our hospital for intractable oral ulcer and abdominal discomfort. Bulky soft-tissue masses were found in pathology speciments in the retroperitoneum from the twelfth thoracic vertebra to the fifth lumbar vertebra during an abdominal computed tomography (CT) scan. Then he was referred for fluorine-18-fluorodeoxyglucose positron emission tomography/CT (^{18}F-FDG PET/CT) due to suspicion of paraneoplastic pemphigus. On the maximum intensity projection image (A: black arrow), a large, elongated mass was displayed in the right abdomen near the spine with slightly increased ^{18}F-FDG uptake; axial CT (B, E and H), corresponding PET images (C, F and I) and PET/CT images (D, G and J) showed multiple heterogeneous soft-tissue masses in the retroperitoneum. Some lesions were fused together with the SUVmax of 3.6, measuring 69mmx29mm, pushing the adjacent normal organs. Massive and large calcifications were observed in the center of the lesions, with coarse (B and D) and arborizing (E, G, H and J) patterns. The longest diameter of the calcified focus was 58mm. Finally, pathology confirmed the diagnosis of Castleman's disease (CD) with a hyaline-vascular variant after the operation.

As a rare lymphoproliferative disorder, CD was first described by Dr Benjamin Castleman in 1954 [1]. Though lesions in the retroperitoneum are easier to calcify than inother locations [2], we have not seen a report with massive and so large calcifications (58mm of the longest diameter) [3]. Since prominent calcifications were the main feature of the lesions, we considered infections, tuberculosis, sarcoma, neurogenic tumor, teratoma and lymphoproliferative disorders in the differential diagnosis [4-6]. We also considered the intractable oral ulcer and radiology sings [4, 7, 8]. In addition, ^{18}F-FDG uptake was revealed in most lesions of CD [9-10]. Therefore, we thought of the diagnosis of CD, which was consistent with the final pathology.

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