This 75-year-old Chinese woman is a patient of arterial hypertension, osteoporosis, chronic lower back pain, and major depression. She visited the Emergency Department for left flank pain. Yet, she denied nausea, vomiting, changed bowel pattern, dysuria or fever. On arrival, her consciousness was clear and her vital signs were all within normal limits. Physical examination disclosed an obese abdomen with a mild tenderness at the left flank but no rebounding pain. There was no tenderness at her back. Her legs were neurologically intact.

X-ray was undertaken to detect suspected urolithiasis. It showed a degenerated spine with old compression fractures and multiple calcifications at both sides of the pelvis (Fig. 1). Lateral film confirmed these calcifications in the subcutaneous tissue of buttocks but not within the pelvis (Fig. 2). Urinalysis reported trace proteinuria but no hematuria. Complete blood count and chemistry panel were all within normal limits.

Discussion

In daily practice of medicine, doctors often call a small nodule as “granuloma”. However, granuloma is a pathological term defined as a collection of macrophages and then maturation into epithelioid cells that attempt to wall off the antigenic but indigestible substance. Calcium may deposit in the granuloma very slowly. Thus, a calcified granuloma often means the presence of a granuloma for a long time. Common causes of granuloma include infections, vasculitis, foreign bodies, and neoplasm. Diagnostic approach for various granulomatous diseases may range from simple to very complex workups.

Intramuscular injections are often administered at the gluteal sites; however, standard needles do not reach the muscle in a considerable number of patients, especially in female (1). Intra-fat injections may result in fat necrosis, fibrosis, granuloma formation, and finally dystrophic calcification (2, 3). Bilateral gluteal calcified granulomas, especially at intramuscular injection sites, are not uncommon in regions where people prefer injections for treating illness. Although trace accumulations in gluteal injection granulomas were reported...
on positron-emission tomography (4), the multiple, bilateral distribution of calcified granulomas at gluteal areas, and a history of previous, repeated “intramuscular” injections can help the differential diagnosis. Next time when you found multiple calcified granulomas in patient's buttocks, ask her or him about the history of frequent gluteal injections. Further imaging examination, incisional or excisional biopsy should be reserved for patients with symptomatic or enlarging lesions.

References


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