Sarcoidosis with Bilateral Epididymal Involvement Leading to Oligo-Asthenospermia

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Sarcoidosis is a multisystemic, chronic granulomatous disorder. The incidence of urogenital system involvement is 0.2% in clinically diagnosed cases and 5% in autopsy cases. We report a rare case of pulmonary sarcoidosis with bilateral epididymal involvement leading to oligo-asthenospermia. A 20-year-old man presented with bilateral epididymal swelling for two weeks. Chest radiography and computed tomography (CT) showed multiple ill-defined nodules in the bilateral lung fields with mediastinal and hilar lymphadenopathies. Pathology confirmed the diagnosis of sarcoidosis. Presnisolone 40 mg daily was administered orally. After ten days of therapy, chest radiography revealed resolution of the nodular lesions and the bilateral epididymal enlargement subsided.

Key words: sarcoidosis, epididymal, asthenospermia, noncaseating granulomas

Case Report

A 20-year-old Chinese man presented to the emergency department (ED) complaining of an enlarged scrotum for two weeks. The patient medical history was unremarkable and he had no scrotal trauma. The patient was painless and he had no sexual intercourse in the past six months. Physical examination revealed an enlarged scrotum, with prominence of the bilateral epididymides was noted. Admission chest radiography showed bilateral hilar lymphadenopathy and several nodular opacities over the left upper lobe (LUL) (Fig. 1A). During hospitalization, a thoracic computed tomography (CT) scan revealed diffuse multiple enlarged nodes in the mediastium and bilateral hilar regions and some ill-defined nodules in both lungs. A scrotal ultrasonogram displayed prominence of the bilateral epididymal heads without intratesticular lesions (Fig. 1B). The differential diagnosis included testicular malignancy and genitourinary tuberculosis. His semen analysis showed oligo-asthenospermia (0.5 M/ml azoospermia with completely static sperm) (Table). Specimens of the mediastinal prevascular lymph node and epididymis were negative for tuberculosis (TB) on polymerase chain reaction (PCR), but pathology showed noncaseating granulomas consistant with sarcoidosis (Fig. 1C, 1D). Presnisolone 40mg daily was started for epididymal involvement and the chest radiography during hospitalization showed increases in infiltration. After ten days of therapy, chest radiography revealed some resolution of the LUL nodular lesion and the bilateral enlarged epididymides subsided on physical examination.
Table  Semen analysis showing oligo-asthenospermia (0.5 M/ml azoospermia with completely static sperm)

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Discussion

Sarcoidosis is a disease of unknown cause that involves inflammation and produces tiny lumps of cells in the body. The lumps are called granulomas because under the microscope they look like grains of sugar or sand. When these granulomas invade the body they can cause permanent damage to the affected organ. To establish sarcoidosis as a diagnosis, a patient must display a clinically and radiographically compatible picture and demonstrate noncaseating granulomas in biopsied tissue after other causes of granulomatous infiltration are excluded. Sarcoidosis most commonly presents with intrathoracic manifestations but can involve virtually any organ system (8,9). Clinical manifestations often vary with the stage of the disease and degree of organ involvement. Patients may be asymptomatic but their chest radiography may demonstrate findings consistent with sarcoidosis. Involvement of the urogenital system is relatively rare, with a 0.2% incidence of all clinically diagnosed cases and 5% of those diagnosed at autopsies (1,2). Sarcoidosis involvement of the epididymis is usually unilateral, nodular, and painless (2,4,6). The effect of genitourinary sarcoidosis on fertility has not been studied, but it is reasonable to assume that the fibrosis and occlusion of the ductus epididymis seen in this disease could cause oligospermia and infertility (10). Leydig cell dysfunction may alter secondary sexual characteristics, however, glucocorticoids are effective in reducing sarcoid-testicular masses and improving gonadal function. Testicular and epididymal sarcoidosis must be differentiated from other causes of granulomatous disease that affect these tissues, including tuberculosis, syphilis, lymphogranuloma venereum, sperm granuloma, filariasis, and Wegner’s granulomatosis (3,5,6). This report presents a rare case of sarcoidosis with bilateral epididymal involvement leading to oligo-asthenospermia. Although the majority of patients with pulmonary sarcoidosis have spontaneous remission within 2 years and do not require any treatment, patients who present with oligospermia or azoospermia should have serial semen analysis and receive corticosteroid therapy (4,7). The use of sperm banking for possible future assisted reproductive techniques is indicated.

References

副睾類肉瘤：病例報告及文獻回顧

沈膺盛  詹佳孟  陳健驊  陳威龍
吳永隆  郭弘義

類肉瘤是一種身體多系統，慢性肉芽腫的病變，很少侵犯到泌尿生殖系統，尤其是副睾。我們報告一個胸腔類肉瘤合併副睾侵犯的罕見病例，精液分析呈現精子過少合併活動力不良。因副睾侵犯及住院期間胸部X光顯示病灶有增加，病患開始接受口服類固醇治療，十天後，胸腔病灶及副睾腫大已有明顯改善。

關鍵詞：類肉瘤，副睾，精子過少合併活動力不良，非壞死性肉芽腫