รายงานผู้ป่วย
Case Report

ซาร์คอยโดซิสชนิดแกรนูโลมาแบบมีเนื้อตาย ในพื้นที่วัณโรคชุกชุม : รายงานผู้ป่วย 1 ราย

*โสภิตา งามวงษ์วาน พบ.**

บทคัดย่อ

ผู้ป่วยชายชาวอาเซอร์ไบจานอายุ 35 ปีอาศัยอยู่ที่ประเทศไทยมาด้วยอาการไอเรื้อรังและเหนื่อยขณะออกแรง น้ำหนักลดอย่างมีนัยสำคัญและตุ่มขึ้นที่ผิวหนัง ผลชิ้นเนื้อจากผิวหนังพบเป็นแกรนูโลมาแบบไม่มีเนื้อตาย (non necrotizing granuloma) ย้อมไม่พบเชื้อวัณโรค ได้รับยาต้านวัณโรคต่อเนื่อง 3 เดือนแต่อาการไม่ดีขึ้น ภาพรังสีทรวงอกพบจุดและเส้นทั่ว ๆ ปอดร่วมกับเงาขั้วปอดใหญ่ขึ้น ภาพเอกซเรย์คอมพิวเตอร์ความละเอียดสูงพบต่อมน้ำเหลืองที่ด้านขวาของหลอดลมและขั้วปอดสองข้างโตร่วมกับมีจุดผิดปกติตามระบบน้ำเหลือง ผลการส่องกล้องหลอดลมไม่พบเชื้อวัณโรคทั้งจากน้ำล้างหลอดลมถุงลมปอดและชิ้นเนื้อปอด พยาธิสภาพจากการตัดเนื้อปอดพบเป็นแกรนูโลมาแบบมีเนื้อตาย (necrotizing granuloma) ร่วมกับมีสัดส่วน CD4 ต่อ CD8 สูง เนื่องจากผู้ป่วยอาการไม่ดีขึ้นหลังจากรักษาด้วยยาต้านวัณโรคและลักษณะของเอกซเรย์คอมพิวเตอร์ความละเอียดสูงเข้าได้กับซาร์คอยโดซิสจึงได้รักษาด้วยสเตียรอยด์ หลังการรักษาเป็นเวลา 13 เดือน อาการของผู้ป่วยรวมถึงผลติดตามเอกซเรย์คอมพิวเตอร์ความละเอียดสูงไม่พบความผิดปกติ จึงสรุปได้ว่าผู้ป่วยรายนี้มีอาการทางปอดและผิวหนังจากโรคซาร์คอยโดซิสชนิดที่เป็นแกรนูโลมาแบบมีเนื้อตาย (necrotizing granuloma)

คำสำคัญ : ซาร์คอยโดซิส, necrotizing granuloma

Necrotizing Sarcoid Granulomatosis in Endemic Area of Mycobacterial Tuberculosis Infection : A Case Report

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Abstract

A 35-year-old man from Azerbaijan presented with chronic cough, exertional dyspnea, significant weight loss and skin papules. His skin biopsy revealed non-necrotizing granuloma with negative acid fast bacilli stain. He was prescribed anti tuberculous drugs for 3 months without improvement. His chest X-ray showed diffuse reticulonodular infiltrations and prominent hilar shadows. Perilymphatic nodules, right paratracheal and both hilar lymphadenopathies were demonstrated on high resolution computer tomography (HRCT) scan. There was no evidence of tuberculosis from bronchoalveolar lavage fluid and lung tissue. Histopathology from lung biopsy showed necrotizing granuloma with high CD4/CD8 ratio. Since his symptoms did not improve after anti tuberculous drugs and HRCT patterns were compatible with sarcoidosis, steroid was initiated. After 13 months of steroid treatment, he had no symptoms and follow-up HRCT showed no infiltration or lymphadenopathy. In conclusion, his diagnosis was necrotizing sarcoid granulomatosis with lung and skin involvement.

Keywords : sarcoidosis, necrotizing granuloma

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Received : Feb 5, 2020 Revised : March 27, 2020 Accepted : April 15, 2020

Introduction

Sarcoidosis is an unknown etiology granulomatous disease involving multisystem, mostly pulmonary and lymphatic systems. Common pathologic features are non-necrotizing granulomas form in one or more organs. Necrotizing sarcoid granulomatosis (NSG) is a rare form of sarcoidosis, characterized by confluent granulomas, granulomatous vasculitis and variable degrees of necrosis, first described by Liebow.[1] Proper diagnosis and treatment are challenging for clinicians, radiologists, and pathologists because of the rarity and similarity of the clinical, radiological, and pathological features of NSG to other granulomatous diseases, such as granulomatous infection, nodular sarcoidosis, and granulomatosis with polyangiitis. The initial symptoms and radiology of NSG are non-specific.[2-4] Variable pulmonary features including cavitary lesions, ill-defined consolidations, solitary nodule or a mass has been reported which mimic pulmonary tuberculosis.[5,6] As tuberculosis can involve multi-organ systems like sarcoidosis and Thailand is among the 22 countries in the world with the highest tuberculosis burden, physician should intensively seek for evidence of tuberculosis and try to exclude tuberculosis before making a diagnosis of NSG.[7] As mentioned above, NSG is an atypical form of sarcoidosis, generally limited to the lung with extra-pulmonary involvement being very rare.[8] Here, the author describes a case of NSG presented with pulmonary and skin involvement.

Case report

A 35-year-old man from Azerbaijan, who lived in Thailand for more than five years, presented with chronic dry cough and exertional dyspnea for 2 months without fever. He lost 5 kilograms and recognized some papules on his back, not itchy or painful. He had untreated, non-cirrhotic chronic hepatitis C infection. First, he visited a hospital in Pattaya and underwent skin biopsy. He could not collect any sputum and the histopathology revealed non-necrotizing granuloma with negative acid fast bacilli (AFB) stain. He was prescribed anti tuberculous drugs. After 3 months of empirical anti tuberculosis treatment, the skin papules still persisted and he continued coughing, so he was referred to Chonburi hospital. He was afebrile and had no respiratory distress. Discrete purplish papules and plaques were observed on his back and upper arms (Fig. 1A). The lungs were normal. Completed blood count showed mild eosinophilia, other routine laboratory results were within normal limit including serum lactate dehydrogenase. Chest X-ray showed diffuse reticulonodular infiltrations and prominent hilar shadows (Fig. 1B). Perilymphatic nodules, right paratracheal and both hilar lymphadenopathies were demonstrated on high resolution computer tomography (HRCT) scan (Fig. 3A-B). Bronchoalveolar lavage fluid from flexible optic bronchoscope for AFB stain and gene expert were negative. Histopathology from transbronchial lung biopsy showed necrotizing granuloma (Fig.2A-B). No organism was identified on AFB stain, CD4 staining was more prominent than CD8 staining (Fig. 2C-D). Although necrotizing granuloma is common pathological finding in tuberculosis, his symptoms progressed after 3 months of anti tuberculosis treatment. Since the pattern of perilymphatic nodules, mediastinal and hilar lymphadenopathies were typically found in sarcoidotic patient, combined with high CD4/CD8 ratio from tissue staining, steroid treatment was started while waiting for mycobacterial culture. Prednisolone 0.5 milligrams per kilograms per day was initiated. After steroid treatment for 3 months, he stopped coughing, gained his normal weight and his skin lesion resolved. Repeated HRCT showed markedly decreased perilymphatic nodules and lymphadenopathies (Fig. 3C-D). His spirometry was normal throughout the treatment. Prednisolone was slowly tapered off and stopped at 13 months after follow-up HRCT showed no infiltration or lymphadenopathy (Fig. 3E-F). There was no mycobacterial growth from his bronchoalveolar lavage fluid.

Discussion

Sarcoidosis is defined as a multisystem granulomatous disorder of unknown cause. Patient may present with a constellation of clinical findings that is so specific for sarcoidosis that the diagnosis may be made empirically without the need for a confirmatory

biopsy such as Löfgren syndrome, Heerfordt syndrome, asymptomatic bilateral hilar adenopathy and Panda and Lambda sign on Gallium-67 scan. If these rare presentations are not observed, the diagnosis requires a tissue biopsy revealing granulomatous inflammation (usually noncaseating), exclusion of alternative causes of granulomatous inflammation, and documentation of systemic disease.[9]

As mentioned above, necrotizing sarcoidosis is rare and has no specific clinical manifestations. Yale Rosen compared 103 cases of necrotizing sarcoid granulomatosis and 111 cases of nodular sarcoidosis, the data showed a striking overlap in the clinical, radiologic, and pathologic features of both entities. The vast majority of patients in both groups presented with pulmonary and/or systemic symptoms. The systemic symptoms include fever, weight loss, night sweats, fatigue, arthralgias, and malaise; the respiratory symptoms include dry cough, dyspnea, chest pain, chest tightness, and rarely hemoptysis. Extrapulmonary manifestations reported in both groups include eye, skin, liver, spleen, lacrimal gland, and central nervous system involvement.[10] Similarly, this patient had non-specific symptoms of chronic dry cough, dyspnea, weight loss and skin eruption. In addition to clinical presentation, history of anti tuberculosis treatment failure, radiographic findings of perilymphatic pattern, pathological result of granuloma, and the immunohistochemistry report of high CD4/CD8 ratio were several clues supporting the diagnosis of sarcoidosis. Granuloma in sarcoidosis is characterized by a core of monocyte-derived epithelioid histiocytes and multinucleate giant cells with interspersed CD4+ T lymphocytes. A minority of cells in or near the granuloma are CD8+ T lymphocytes, fibroblasts, regulatory T cells, and B lymphocytes.[11] The discordance of pathological findings, as non-necrotizing granuloma from his skin biopsy and necrotizing granuloma from his lung tissue, has been reported in a case of NSG with non-caseating granuloma in liver specimen but extensive necrotic granuloma in splenectomy material.[12] In this case, the different feature of granulomas may be affected by different severity and time obtaining tissue biopsy. The patient underwent skin biopsy after 2 months of onset but transbronchial lung biopsy was done at 3 months later.

Conclusion

In conclusion, the diagnosis of NSG should be made very carefully in suspected cases based on consistent clinical, radiologic and histologic findings and thorough exclusion of possible causative microorganisms especially tuberculosis in endemic area.

Acknowledgement The author thanks Dr. Kaimook Gosinthrajit for her special assistance.

Potential conflicts of interest There is no conflict of interest in this report.

Figure

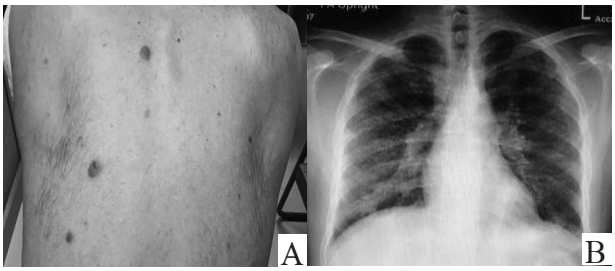

Figure 1 Photo shows discrete purple papules and plaques (A). Chest X-ray shows diffuse reticulonodular infiltrations and prominent hilar shadows (B).

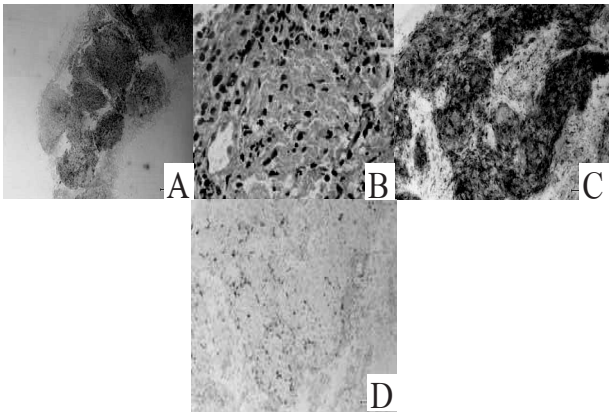

Figure 2 Section showing multiple granuloma with necrosis with multinucleated giant cells granuloma at x 4 magnitude (A). Epithelioid cells with necrotic background at x 40 magnitude (B). Immonohistochemical staining of CD4 (C) and CD8 (D) showing high CD4/CD8 ratio at x10 magnitude.

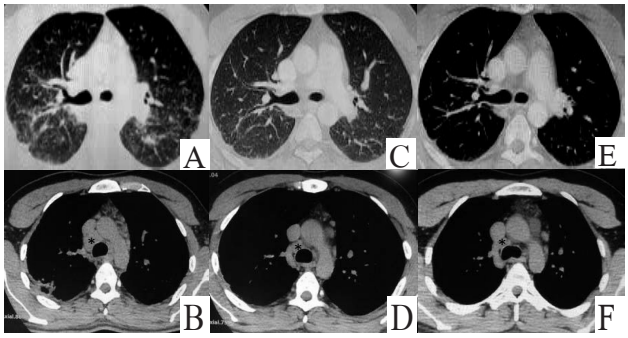

Figure 3 HRCT showing diffuse perilymphatic nodules (A) and right paratracheal lymphadenopathy (B) before steroid treatment, after 3 months treatment (C, D), and after 13 months treatment (E, F). Note that right paratracheal node (*) markedly decreased in size.

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