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# Immunologic finding of disseminated granuloma reaction in patients with *Mycobacterium tuberculosis* and sarcoidosis

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## ABSTRACT

**Introduction:** Necrotizing sarcoid granulomatosis (NSG) is a rare syndrome with unknown etiology. The disease is frequently confused with sarcoidosis and other granulomatous diseases. Diagnosis is made based on typical histologic criteria. No specific laboratory finding can confirm NSG diagnosis. The gender ratio of women to men has been reported as being as high as 4:1 and has a good prognosis.

**Methods and results:** In this report, the clinical and genetic features were surveyed of a 36-year-old male with extra-pulmonary NSG with unique manifestations, such as inguinal mass with positive smear and negative culture for the infection of *Mycobacterium tuberculosis* (MTB), which was not responsive to the first-line TB treatment and was characterized as a multidrug-resistant (MDR) tuberculosis (TB). Later on, he was admitted for the MDR cure, and he did not react to the gold standard of MDR treatment. Finally, he presented with a huge lymphoid granuloma with massive ascites that was diagnosed as an NSG by IHC. He cured well with prednisolone and all symptoms of the disease were gone. At the hospitalization time, all laboratory experiments were well planned, such as a workup for the detection of defects of loop IL-12/IFN- $\gamma$ , HLA-DR typing, and immunologic workup by flow-cytometry analysis.

**Conclusion:** This is the first case report from patients with unique features of NSG combined with MTB.

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