It Could Be Worst Than That !
Sarcoidosis

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Introduction

Sarcoidosis is a multisystem disease of unknown etiology, characterized by non-caseating granulomatous inflammation in many tissues and organs.
is as a restrictive lung disease.[1]
Sarcoidosis effecting both genders and all races and age groups.

There are certain interesting epidemiologic trends:

- A consistent predilection for adults younger than 40 years of age.
- A high incidence in Danish and Swedish populations, and in the United States among African Americans.
- A higher prevalence among nonsmokers.[1]

Etiology and Pathogenesis

The etiology of sarcoidosis remains unknown.[1]
Several lines of evidence suggest that It's a disease of disordered immune regulation in genetically predisposed individuals exposed to certain environmental agents.
Several immunologic abnormalities in sarcoidosis suggest the development of a cell-mediated response to an unidentified antigen.[1]

These immunologic "clues" include the following:

- Intraalveolar and interstitial accumulation of CD4+ TH1 cells.
- Increases in TH1 cytokines such as **IL-2** and **IFN-γ**, resulting in T-cell proliferation and macrophage activation.
- increases in several cytokines **(IL-8, TNF, macrophage inflammatory protein-1α)** that recruitment of additional T cells and monocytes and contribute to the formation of granulomas .[1]

Morphology and Manifestations

The diagnostic histopathologic feature is the presence of non-caseating granulomas in various tissues.[1]

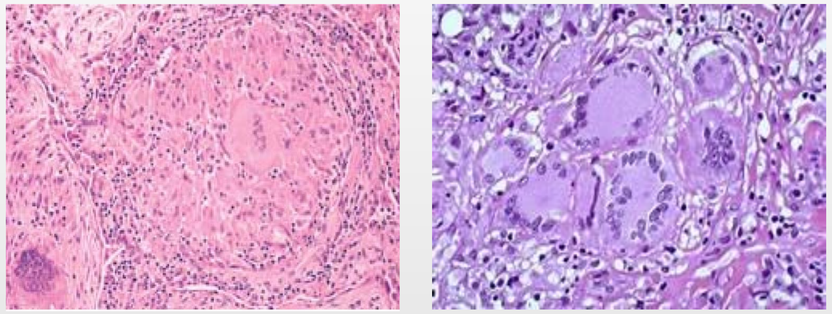


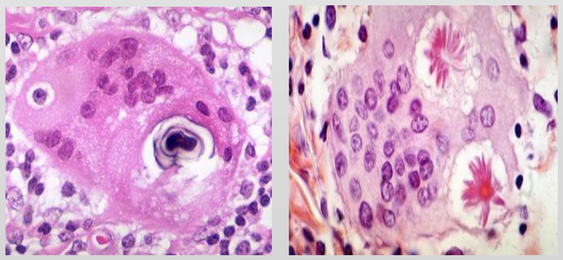
Figure (1) Sarcoid characterized by non-caseating granulomas with many giant cell are present.

There are Two other microscopic features are sometimes seen in the granulomas:

Figure (2)

(1) Schaumann bodies.

(2) asteroid bodies



(1) **(2)**

- The lungs are involved in 90% of patients.
  In 5% to 15% of patients, the granulomas are replaced by diffuse interstitial fibrosis
  so-called **"honeycomb lung"**.[2]

Figure (3) honeycomb lung

- Intrathoracic hilar and Para- tracheal lymph nodes are enlarged in 75% to 90% of patients, while one-third present with peripheral lymphadenopathy.[2]
- Skin lesions in approximately 25% of patients. **Most commonly Erythema nodosum.[1]**
- Involvement of the eye and lacrimal glands occurs in about one-fifth to one-half of patients.
  These ocular lesions accompanied by inflammation in the lacrimal glands, with suppression of lacrimation **(sicca syndrome).**
- Unilateral or bilateral parotitis with painful enlargement of the parotid glands occurs in less than 10% of patients.[2]
- The spleen and liver mat be involved and contains granulomas.
- Involvement of bone marrow in 40% of patients.
  Sometimes there is hypercalcemia and hypercalciuria.[1]

Conclusion

- Sarcoidosis is a multisystem disease of unknown etiology.
- The diagnostic histopathologic feature is the presence of non-caseating granulomas in various tissues.
- Immunologic abnormalities include high levels of CD4+ TH1 cells in the lung that secrete cytokines such as IFN-γ.
- Clinical manifestations include lymph node enlargement, eye involvement, skin lesions and visceral involvement (liver,skin,bone marrow).

References

1. Kumar, V., Abbas, A., Aster, J. and Perkins, J. (n.d.). *Robbins basic pathology*. 10th ed.
2. Khan, A. (n.d.). Clinical manifestations, pathophysiology, diagnostic methods, imaging and intervention in sarcoidosis.