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Hypersensitivity Pneumonitis: The Head Cheese Sign

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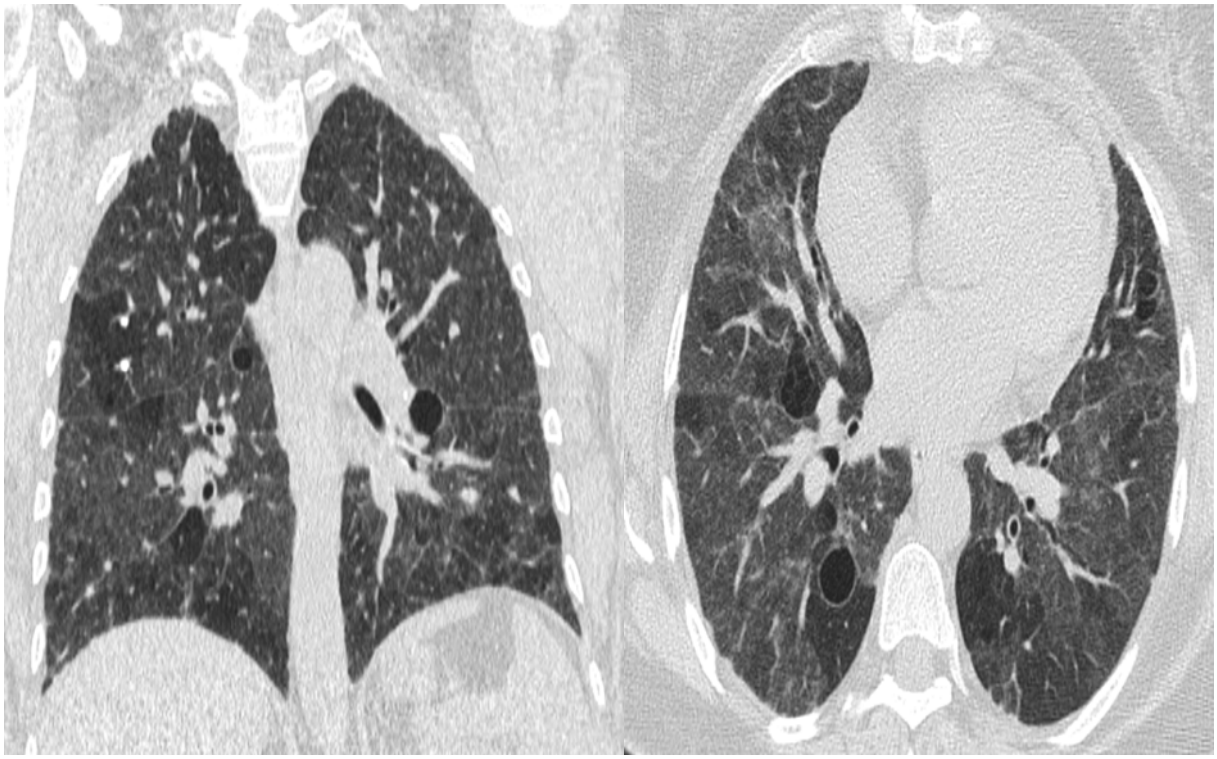

Figure 1: Chest CT in parenchymal window, axial and coronal section without contrast, showing diffuse ground glass opacities (A), which are associated with hypodense areas related to air trapping (B) create the "head cheese' sign In typical non-fibrosing forms. It is associated with several cyst lesions, rounded, with thin walls.

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Abstract

Hypersensitivity pneumonitis (HSP) is a form of interstitial lung disease that requires early diagnosis and treatment, as it can lead to progressive pulmonary fibrosis. However, the antigens involved are very diverse and new causes of HSP are frequently identified. Although relatively rare. HSP seems to be under-diagnosed because of its very heterogeneous presentation in its non-fibrosing or fibrosing forms. antigenic avoidance is the rule when possible. Systemic corticosteroid therapy is the first line medical treatment in case of severe hypoxemic form in order to prevent the appearance of fibrosing lesions.

Hypersensitivity pneumonitis (HP) is a diffuse interstitial lung disease (ILD) caused by an immune response secondary to the inhalation of organic or inorganic antigens in the environment in predisposed individuals [1]. It's a relatively rare pathology that can affect all age groups with no clear gender predominance. All HP may present with aspecific respiratory symptoms such as dyspnea or cough. In some cases, these clinical manifestations accompanied by an influenza-like syndrome, chest pain or weight loss. At the auscultatory level, the presence of high-pitched whistling in the middle of inspiration ("squeaks") is classic but not specific to HP [2]. The former classification of PHS, which distinguished

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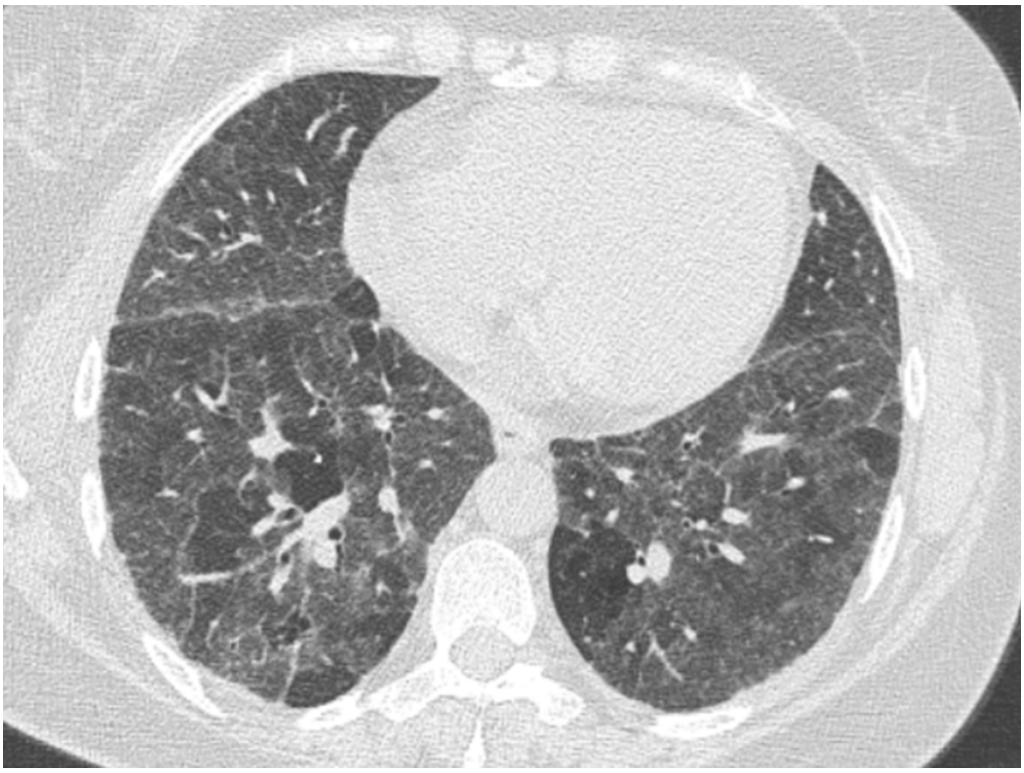

Figure 2: Chest CT in parenchymal window, axial section without contrast, showing Multiple areas of mosaic attenuation, ground glass opacities, and normal lung tissue (lobular regions of high normal and low attenuation) consistent with "head cheese" sign.

three clinical entities (acute, subacute and chronic) has recently been abandoned in favor of a classification based on the presence or absence of radiological and/or histopathological fibrosing lesions. Thus, we currently classify non-fibrosing and fibrosing PHS [3]. The diagnosis of PHS is complex due to the heterogeneity of the clinical, radiological and histological presentations of the disease. The exploration of PHS uses high resolution CT (HR-CT) in millimeter slices without injection, performed in deep inspiration, and in prolonged expiration, In non-fibrosing forms, diffuse ground glass opacities and centro-lobular nodules are mainly found, In fibrosing forms, there is a variable association of linear and reticular irregular opacities, ground glass and septal thickening [4] cysts may be associated with the parenchymal lesions, also amphysematous forms have been described. The presence of mosaic attenuation, aerial trapping, ground glass and centrilobular nodules are strong features in centrilobular nodules are strong elements in favour of in favor of the diagnosis of PHS according to an expert consensus [5] Mosaic attenuation is a local combination of areas of two distinct densities corresponding to alternating ground glass and of ground glass and healthy lung or healthy lung and hypodense areas due to air trapping hypodense areas due to air trapping or lowered vascularity, The local association of areas of normal density, increased density and lighter areas produces the "head cheese" sign. The diagnostic criteria for the disease are predominantly based on antigen exposure identification ,clinical and chest HRCT scan pattern, and bronchoscopic/histopathological findings [1].

The first step in treatment is to identify and eliminate the antigen responsible for the disease, but this is not always feasible because it is not always found. However, systemic corticosteroid therapy is considered the first-line medical treatment for severe hypoxemic forms [6].

Keywords: Hypersensitivity pneumonitis; Imaging; Head cheese sign

Conflict of Interest

The authors are contributed equally and declare no competing interest.

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