Ocular and parotid sarcoidosis – panda sign

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A 16-year-old caucasian male was referred by the ophtalmologist for rheumatological evaluation due to history of anterior bilateral uveitis. He had no relevant past medical history and the physical examination was normal. Investigations revealed angiotensin converting enzyme (ACE) levels of 60 U/L (normal range: 8--55U/L) and the Gallium-67 scan (67GA) (Figure 1) showed "increased uptake in both ocular regions and both parotid glands suggesting inflammatory disease, eventually sarcoidosis". The thoracic, abdominal and pelvic CT scan had no evidence of other organs involvement. Mantoux test result was negative. Were excluded also lymphoma, Sjögren syndrome and acquired immunodeficiency syndrome. The patient was treated with topical steroids and cycloplegics with good response and five years later remains asymptomatic without treatment.

Sarcoidosis is an inflammatory multisystem granulomatous disease of unknown etiology[1], with a broad range of clinical manifestations. It can affect any organ, although most frequently affects the lung and intrathoracic lymph nodes[2]. The isolated extrathoracic involvement is rare, about 10%[1]. The ocular involvement occurs in 25-50% of patients[3], frequently between the ages of 20 to 40 years; however, children and the elderly can also be affected[3]. It is seen generally early in the course of the disease, may coexist with asymptomatic systemic disease and can precede systemic involvement by several years[3]. Uveitis is the most common manifestation, preceding the diagnosis of sarcoidosis in 30% of cases[3]. The parotid and other salivary glands may be affected in 6% of patients[3]. In Gallium-67 scan the normal nasopharyngeal uptake combined with abnormal bilateral symmetrical uptake of the lacrimal and parotid glands (with or without submandibular gland 67GA uptake) produces an image similar to the face of a panda[4] (Figure 1). A study of 65 patients with sarcoidosis showed that 79% presented a panda pattern and showed an 80% sensitivity for stage I disease and 74% sensitivity for stage II disease[4]. However the panda sign is not specific for sarcoidosis, as bilateral accumulation of 67GA can also be seen in Sjogren's syndrome, lymphoma (after irradiation of head and neck) and acquired immunodeficiency syndrome[4]. Other characteristic radiologic sign in Gallium-67 scan is called the lambda pattern, that results from the 67GA bilateral symmetrical uptake in parahilar and infrahilar lymph nodes, together with the right paratracheal lymph node, creating the shape of the Greek letter lambda. The presence of a lambda plus panda pattern is thought to be highly specific for sarcoidosis[4]. The patients with presumed sarcoidosis (intraocular inflammation compatible with the diagnosis of sarcoidosis in conjunction with raised serum ACE levels) were similar to those with histologically proved sarcoidosis in terms of ocular presentations and clinical course[5].

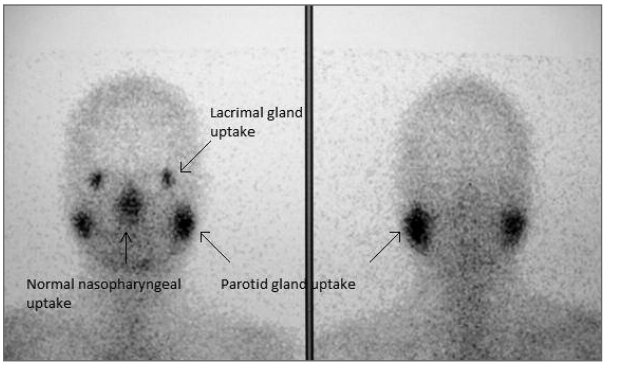

FIGURE 1. Panda sign in Gallium-67 scan

In conclusion, bilateral uveitis as the initial manifestation of ocular sarcoidosis must be considered because early diagnosis and effective treatment are crucial to avoid the development of unfavorable visual outcome (glaucoma and cataract). The panda sign can support the diagnosis of sarcoidosis in difficult cases, especially in patients with extrathoracic involvement (for

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example uveitis) and normal chest radiogram, and even not being specific for sarcoidosis it limits greatly the differential diagnosis.

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