Simultaneous occurrence of generalized granuloma annulare, anterior uveitis and giant cell arteritis: Coincidental or not?

Survenue simultanée d’un granulome annulaire généralisé, d’une uvite antérieure aiguë et d’une artérite gigantocellulaire : coïncidence ou non ?

Giant cell arteritis (or temporal arteritis, TA) is a vasculitis that affects large and middle-sized blood vessels in individuals older than 50 years of age. In 1990, Fukai et al. published the rare association of TA with generalized granuloma annulare (GGA) [1]. Eighteen years later, Yáñez et al. reported an additional case [2]. Until now, two publications have mentioned such association [1,2]. We wish to share our experience regarding an additional patient that developed simultaneously a left anterior uveitis.

Case report

In May 2007, a 78-year-old Caucasian male patient, with a past history of colonic polyposis, was referred for a generalized skin eruption made of erythematous macules and papules located on the back, the trunk and the upper limbs. Microscopic examination of a cutaneous punch skin biopsy revealed lesions of the palisading granulomatous pattern in the dermis favouring GGA. The rest of physical examination was unremarkable except for a red left eye evolving almost for a month too. Laboratory findings including antinuclear antibodies and angiotensin converting enzyme were unremarkable. Thoracic and abdominal CT scan ruled out any granulomatous lesions. Ophthalmologic examination displayed arguments for anterior uveitis. TPHA-VDRL serology was negative. Lyme Borreliosis serology was not performed. He was initially treated with corticosteroid ointments with a good efficacy. By the end of June 2007, he developed bilateral temporal and retroocular cephalalgias, scalp hyperesthesia and jaw claudication as well as a 5–7 kg weight loss. Sedimentation rate was 45 mm, fibrinogen 5.5 g/L and c-reactive protein was elevated to 19 mg/L. Temporal artery biopsy confirmed the diagnosis of giant cell arteritis with internal elastic limit disappearance, intimal thickening with artery occlusion and giant cells and granuloma infiltrates in the vessel walls. Corticosteroid therapy was quickly initiated with intravenous bolus followed by oral corticosteroid therapy (0.7 mg/kg/day) with an excellent efficacy on clinical symptoms, skin eruption and biological inflammatory markers. After a 3-year follow-up, neither GAA, TA or uveitis relapsed during tapering corticosteroid dosage. However, in 2008, the patient developed bilateral neovascular glaucoma related to internal carotid artery stenosis and he was also found during follow-up to have isolated hyperferritinaemia. Both conditions are merely coincidental and unrelated to TA.

Discussion

To the best of our knowledge, only two prior cases of TA – GGA association have been described [1,2]. Fukai et al. reported a 79-year-old male patient with GGA 7 months before he was diagnosed TA with headaches and transient visual loss. Corticosteroid therapy was efficient on both conditions [1]. Conversely, Yáñez et al. reported a 69-year-old woman with a 3-year-history of TA who developed GGA. The latter subsided with increase dose of corticosteroid therapy, while TA was totally quiescent during the skin rash [2]. With only three reported cases over the past 2 decades, one can only speculate on a true physiopathological link between those diseases. Fukai et al. [1]
hypothesized a potential relationship based on several common features between GGA and TA:

i) common histological pattern (granulomatous infiltration, giant cells, loss of elastic fibers);

ii) presence of necrosis, fibrinoid changes and vessel thickening and occlusion in a series of granuloma annulare patients [3], common T-cell lymphocytes infiltration, potential common sun-related factor and favourable response to corticosteroid therapy for both conditions [1].

However, granuloma annulare is far from being an uncommon skin condition and both its generalized variant [4] and TA occur in the elderly [5]. Granuloma annulare is a benign, asymptomatic and self-limited eruption affecting patients of all ages and whose aetiology is currently unknown. Trauma, infections, malignancies and drugs have been reported as potential inciting factors. A delayed-type hypersensitivity reaction to an unknown antigen is postulated to be the precipitating agent [4,6,7]. Elastic and collagen fiber damage would be the consequences of such delayed-type hypersensitivity reaction [7]. Vasculitis had been thought to be a pathogenetic mechanism in granuloma annulare [3]. But, over the years and, recently again, studies failed to show a major role of vasculitis in the process [7]. In the above case, a striking feature is the short delay of onset between these diseases as visual manifestations and skin eruption occurred within one to two months. Our case is further complicated by the occurrence of anterior left uveitis. The association between granuloma annulare and uveitis has been reported formerly [8–12], and may occur without underlying sarcoidosis. Our patient never displayed any symptoms for such condition. Besides, the association between uveitis and TA is debated in the literature with again a few cases [13–15]. Interestingly, a 69-year-old male patient presented with anterior unilateral uveitis 3 weeks before symptoms of TA [15]. It remains therefore impossible in our case to draw a definite conclusion whether uveitis could be related to TA, granuloma annulare or both! The time correlation between these three conditions is intriguing. Despite there is doubt upon a true link between these conditions, with the data in hand, this case should be considered as merely coincidental. Physicians should be aware that any elderly patient with granuloma annulare may present giant cell arteritis, whether both conditions are related or not.

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References


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