Association of sarcoidosis and myasthenia gravis: Case report

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Abstract

Whereas the coexistence of different autoimmune or rheumatologic diseases with myasthenia gravis (MG) is well documented, its combination with sarcoidosis is extremely rare. Presented here is an interesting case with coexisting MG and sarcoidosis.

Case report

A 42-year-old female patient suffered from a facial palsy. Clinical examination was normal, as well as brain MRI. A chest CT scan confirmed multiple mediastinal adenopathy with interstitial syndrome. Spirometry showed a restrictive lung disease. The bronchoalveolar lavage showed a lymphocytic alveolitis at 48%. The patient's calcium level was normal. Further tests showed increased serum angiotensin converting enzyme (ACE) levels. The tuberculin test was negative. Mediastinoscopy was performed and a lymph node biopsy showed multiple typical noncaseating granulomas. The diagnosis of systemic sarcoidosis with pulmonary and neurological involvement was established. The patient was treated with 1mg/kg/day corticosteroids leading to clinical improvement of her facial palsy. Then, steroid treatment was declined. Two years later, she suffered from recurrence of facial palsy with episodes of dysphonia, ptosis and swallowing difficulties. Neurological examination revealed weakness in all her extremities, both proximal and distal. Amplification of symptom intensity after exercise was also reported and documented on examination. The tensilon test, as well as the repetitive nerve stimulation test, was positive. Acetylcholine receptor (AChR) binding antibodies were elevated consistent with MG. Based on all the above-mentioned findings, the patient was diagnosed with having coexistent MG and sarcoidosis. A new CT of the thorax revealed no signs of thymic hyperplasia or thymoma. Oral administration of pyridostigmine was started. Since no full symptom remission was achieved, prednisone was added leading to further clinical improvement. During her hospital stay, she developed respiratory distress and hypoxemia for which the patient was intubated. Intravenous immunoglobulins were performed, providing rapid but transitory improvement. Plasmapheresis was slightly more efficient.

Discussion

The coexistence of sarcoidosis and MG is very rare. Based on a literature review, only 12 cases were reported [1-10]. In some cases, MG come first, while in others, sarcoidosis was already diagnosed when myasthenic features began. The originality of our case is the occurrence of sarcoidosis and the MG at the same time. neurosarcoidosis is a complication in around 5% of patients with sarcoidosis [11]. Its most frequent manifestation is cranial neuropathy. The facial nerve is most commonly affected, often bilaterally (around 25% in all reports). In our patient's case, systemic disease was also present, affecting the chest. This clinical data had clearly supported the diagnosis of neurosarcoidosis. At this moment, other cranial nerve examinations were normal. According to the literature, the AChR binding antibodies were elevated in all cases except one, where antibodies to muscle-specific tyrosine kinase were found[10]. Whether a common immunogenetic basis between MG and sarcoidosis exists or not, remains unclear. Indeed, on the one hand MG is antibody-mediated. On the other hand, sarcoidosis is characterized by the accumulation of activated T-cells in the affected tissues with subsequent granuloma formation. However, the finding of granulomas in cases of MG has recently been reported[12,13].

Conclusion

It is noteworthy to report this case because of the multiple interesting features observed as well as the rarity of occurrence.

Conflict of interest: none

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