

# Letter to the Editor

## Relapsing polychondritis following silicone breast implant: first description

Dear Editor,

Autoimmune/inflammatory syndrome induced by adjuvants (ASIA) is a recently described autoimmune disorder characterized by autoimmune manifestations or disease development after adjuvants contact<sup>1</sup>. Adjuvants can be commonly found in vaccine products, immunization substances, mineral oils, cosmetics, silicone breast implants, and other therapeutic/medical devices, and they are considered safe and effective<sup>2</sup>. Several autoimmune diseases are described after silicone breast implants (SBI) and include Undifferentiated Connective Tissue Disease, Sjögren syndrome, and Still's disease<sup>3,4</sup>. However, to the best of our knowledge, a case of ASIA syndrome patient characterized by relapsing polychondritis after SBI has not been previously reported.

A 59-year-old woman who had a history of poliomyelitis since she was 1.5 years old, undergoing 18 surgical procedures was related to polio sequelae. At 38-year-old, she was diagnosed with post-poliomyelitis syndrome, characterized by severe fatigue, diffuse arthralgia, and myalgia, and muscle weakness, treated with physical therapy and acupuncture. In November 2013, she received a bilateral polyurethane coated SBI (Silimed®, Rio de Janeiro, Brazil) due to esthetical reasons and had a nipple bilateral necrosis after two days of surgery. After 2 years, a monoclonal band (IgG lambda) was detected in her serum, and a diagnosis of monoclonal gammopathy of uncertain significance was determined. In 2017, she started left auricular chondritis without lobe involvement (Figure 1), after one month, the right ear also became inflamed, and nasal cartilage was also involved. During this period, she had polyarthralgia, hoarseness, and several episodes of costochondritis. 25-OH-vitamin D was 10 ng/mL [normal range (nr): > 30 ng/mL], erythrocyte sedimentation rate of 35 mm/1st hour (nr: < 10



**Figure 1.** Right and left ears showing marked erythema over the auricular pavilions sparing the ear lobes.

mm/1st hour), and C-reactive protein of 4.7 mg/L (nr: < 5 mg/L). Antinuclear antibodies, anti-dDNA, anti-Ro/SS-A, anti-SS-B, and rheumatoid factor were absent. Cell blood count and blood biochemistry were normal. In October 2017, she received the diagnosis of relapsing polychondritis since she fulfilled three out of the six McAdam's criteria<sup>5</sup>: bilateral chondritis, nasal chondritis, and trachea involvement (hoarseness). She received prednisone 40 mg/day and methotrexate, although she experienced severe diarrhea with this last drug, and it was excluded. She received intravenous tocilizumab 400 mg once a month since 2018. Currently, she is under tocilizumab, and in clinical remission of RP.

Complications associated with SBI are widely described. Although, in a fraction of genetically susceptible and predisposed subjects, the administration of these substances may lead to the onset of serious adverse effects, due to the activation of autoimmunity, via disrupting the immunological balance of the host, owing to a bystander polyclonal activation of B lymphocytes, molecular mimicry or other pathophysiological mechanisms<sup>1,2</sup>. Monoclonal gammopathy of uncertain significance has been described after SBI in 5/288 women, although no firm conclusion of this rare association is available yet<sup>6</sup>.

Neither previous cases of RP after SBI have been found in the literature. Therefore, it is the first description of this autoimmune disease in patients who received an SBI.

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#### **Conflict of interest**

The Author declares that he has no conflict of interests.

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#### **Author Contributions**

JFC: Conception, analysis, writing, interpretation, revision, submission.

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#### **Ethical Statement**

The author declares that he followed the World Medical Association Declaration of Helsinki in this study. Informed consent was obtained from the patient for publication of her case. No image of her is used.

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