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Letter to the Editor

COVID-19 in a pregnant ASIA syndrome patient

Dear Editor,

Autoimmune/inflammatory syndrome induced by adjuvants (ASIA) is a recently described autoimmune disorder characterized by autoimmune manifestations or disease development after adjuvants exposure. An extensive description of 500 subjects with ASIA was recently published and showed a female predominance, and most cases were well-defined as immune diseases and were linked mainly to exposure to hepatitis B and influenza vaccinations[1]. However, to the best of our knowledge, no cases of ASIA syndrome with COVID-19 was already described in the literature.

A 28 years old female patient with an unmarked past medical history and a family history positive for Hashimoto's thyroiditis and psoriasis. She undergone to a silicone breast implant 9 years ago. Five years later, initiated rosacea, daily episodes of sudden tachycardia compatible with the postural orthostatic transient syndrome (POTS), including one episode that heart rate reached 160 bpm, insomnia, memory and concentration reduction, casein intolerance, seborrheic dermatitis, and had two spontaneous fetal losses with 6 and 8 weeks (the second was secondary to Turner's embryopathy at fetal karyotype). She had a positive anticardiolipin of 68 MPL, 51 MPL (after 3 months), 12 GPL, and lupus anticoagulant (twice). She denied thrombosis or thrombocytopenia. She started anxiety with several panic attacks and needed mirtazapine. Laboratory tests showed antinuclear antibodies with a titer of 1:640 and dotted fine speckled pattern and anti-DFS70. Anti-dsDNA, anti-Ro/SS-A, anti-La/SS-B, anti-U1RNP, anti-Scl70., anti-Jo-1, ANCA, anti-myeloperoxidase, lupus anticoagulant, rheumatoid factor, anti-CCP were not detected, and complement levels were normal. 25-OH-vitamin D was 27 ng/mL [normal reference (nr): > 30 ng/mL]. Thrombophilia screening (factor V Leiden, mutant prothrombin, homocysteine, proteins C and S, antithrombin III) was normal. Serology for infectious diseases, such as syphilis, HIV 1 and 2, HTLV I and II, hepatitis B, and C was absent. Electrocardiography showed sinus tachycardia. Echocardiography and 24-hour Holter were interpreted as normal. She was treated with vitamin D3 20,000 IU/day, hydroxychloroquine 400 mg/day, and it was suggested to extract breast implants (Figure 1). She received an ASIA diagnosis since she had exposition to silicone, the appearance of several clinical manifestations, and improved clinical features after silicon extraction. After 6 months of surgery, she returned much better, with energy and disposition, memory and concentration came back, the complete absence of skin lesions, marked improvement of intestinal symptoms, only three episodes of tachycardia in 6 months, normal vitamin D levels, and reduction titers of ANA to 1:320, IgM anticardiolipin to 20 MPL and IgG anticardiolipin was negative. She is currently pregnant at 18 weeks, and in September 2020, she started mild dyspnea, ageusia, and anosmia. She was to an emergency department, and the RT-PCR test for COVID-19 was positive. However, peripheral saturation and thorax images were normal. She was discharged to a quarantine home for observation. After one month, she was asymptomatic; she recovered the smell and gustation, pregnancy, and fetus within normal developmental.

The presented case had an excellent outcome after COVID-19. She was under vitamin D and hydroxychloroquine. Although several studies showed no role for the last drug, some studies show that vitamin D may be an adjuvant in COVID management[2]. In a parallel pilot randomized, open-label, double-masked clinical study with 50 subjects with COVID-19, vitamin D supplementation reduced the chance of intensive care hospitalization[3].

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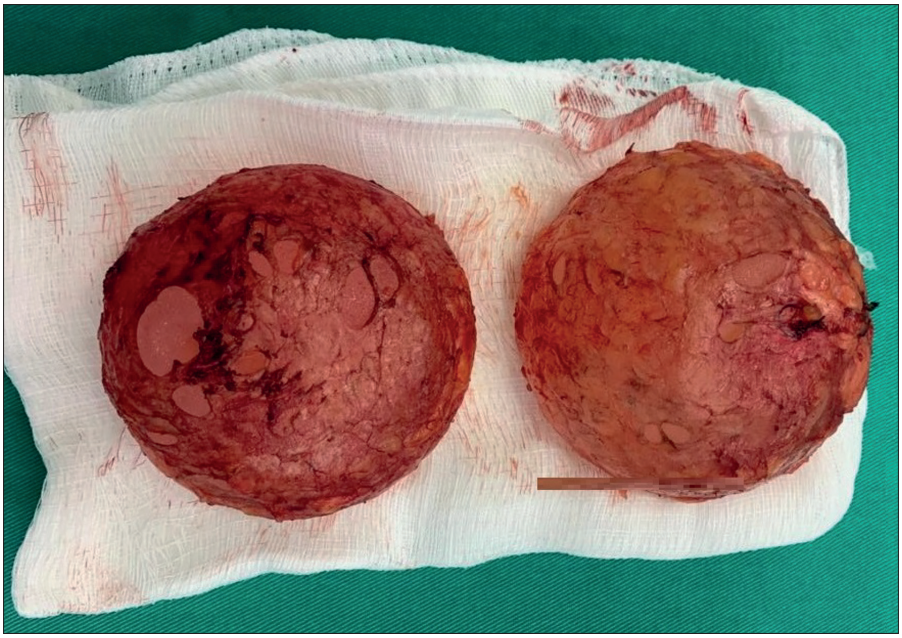

Figure 1. The two silicone breast implants "en bloc" extraction and capsulectomy immediately after surgical procedure.

Concerning pregnancy and COVID-10, a study that evaluated data from hospitals in 13 US states showed that among 598 pregnant women aged 15 to 49 years with COVID-19, about half were asymptomatic at admission. They were admitted most often during their third trimester of pregnancy. The main reason for hospitalization was in the third trimester due to giving birth rather than COVID-19-related reasons[4]. On the other hand, admission in the first and second trimesters occurred more likely to be admitted for COVID-19-related illness than labor and delivery. These findings are in line with our patients; she was in the 2nd trimester and visited the hospital for COVID-19 reasons.

In that article, the authors concluded that: "Identifying COVID-19 during birth hospitalizations is important to guide preventive measures to protect pregnant women, parents, newborns, other patients, and hospital personnel"[4].

Concerning risk factors for severe COVID-19 in RD patients, a Swiss study evaluated 456 rheumatic and non-rheumatic patients. The authors observed that severe COVID-19 was associated with increased age, male sex, and the presence of connective tissue disease[5].

Abbreviations

ASIA: autoimmune/inflammatory syndrome induced by adjuvants; COVID-19: Coronavirus disease 2019.

Conflict of Interest

The Author declare that they have no conflict of interests.

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