

COVID-19 vaccination unveiling subclinical Sjögren’s syndrome

Sir,
A 55-year-old male with a history of colon carcinoma resected 3 years previously, received the first dose of ChAdOx1 nCoV-19 vaccine (Oxford/AstraZeneca). Ten days post-vaccination, the patient presented widespread petechiae and, some days later, bleeding gums and haematuria, with no apparent intercurrent process. Standard laboratory tests were normal. He denied respiratory and gastrointestinal complaints or a history of infection and no personal or family history of bleeding or autoimmune disease. The patient was hospitalised 20 days post-vaccination with a platelet count of $3 \times 10^9/L$, with no other altered haematological or biochemical parameters, and intravenous methylprednisolone 100 mg daily was administered. Nasopharyngeal swab for SARS-CoV-2 was negative, bone marrow examination was normal, *Helicobacter pylori* infection was ruled out, anti-PF-4 antibodies were negative, and COVID-19

serology showed positive IgG antibodies. Additionally, he tested negative for HIV, hepatitis B, and hepatitis C antibody. There was no therapeutic response to methylprednisolone; intravenous immunoglobulin 1 g/kg was added, and the patient was discharged with a platelet count of $148 \times 10^9/L$ and a diagnosis of immune thrombocytopenia (ITP), pending immunological results. Twenty days post-discharge, the platelet count was $24 \times 10^9/L$, and eltrombopag was initiated. A complete immunologic panel including rheumatoid factor, complement levels (C3 and C4), and antibodies against specific antigens (centromere, dsDNA, Jo1, Ribosomal P Protein, RNA, Sm, La/SS-B and antiphospholipids) was negative except for positive antinuclear antibodies (IIF on HEp-2 cells, fine speckled pattern; titer 1/80), positive anti-Ro60/SS-A antibodies (IIF) and weakly-positive anti-Ro52 antibodies (Dot-blot); the patient was referred to the Autoimmune Diseases Department. No clinical data suggested systemic autoimmune disease, including sicca symptoms. Ophthalmological examination showed

normal Schirmer’s test values ($>10\text{mm}$ in both eyes), abnormal break up time (BUT) (RE: 10 sg, LE: 4 sg; normal values >10 sg), and positive lissamine green staining in the temporal (1+) and nasal (1+) areas of both eyes (van Bijsterveld score: 0-3+ in temporal, corneal, and nasal areas), while salivary gland scintigraphy showed severely-reduced salivary function (class 3, Schall’s classification) (Fig. 1). Salivary gland biopsy was not carried out due to the low platelet count. The patient was diagnosed with subclinical Sjögren’s syndrome (SS).

ITP, a haematological autoimmune disease, may appear after viral infection or vaccine administration (1, 2). SARS-CoV-2 can be added to the list of potential triggers. On the one hand, ITP has been reported in around 30 patients after acute SARS-CoV-2 infection, affecting predominantly people older than 50 years with the ITP symptoms (purpura and mucosal bleeding) appearing at least 2 weeks after onset of COVID-19 symptoms in nearly half the cases (3). On the other hand, 20 cases of ITP following

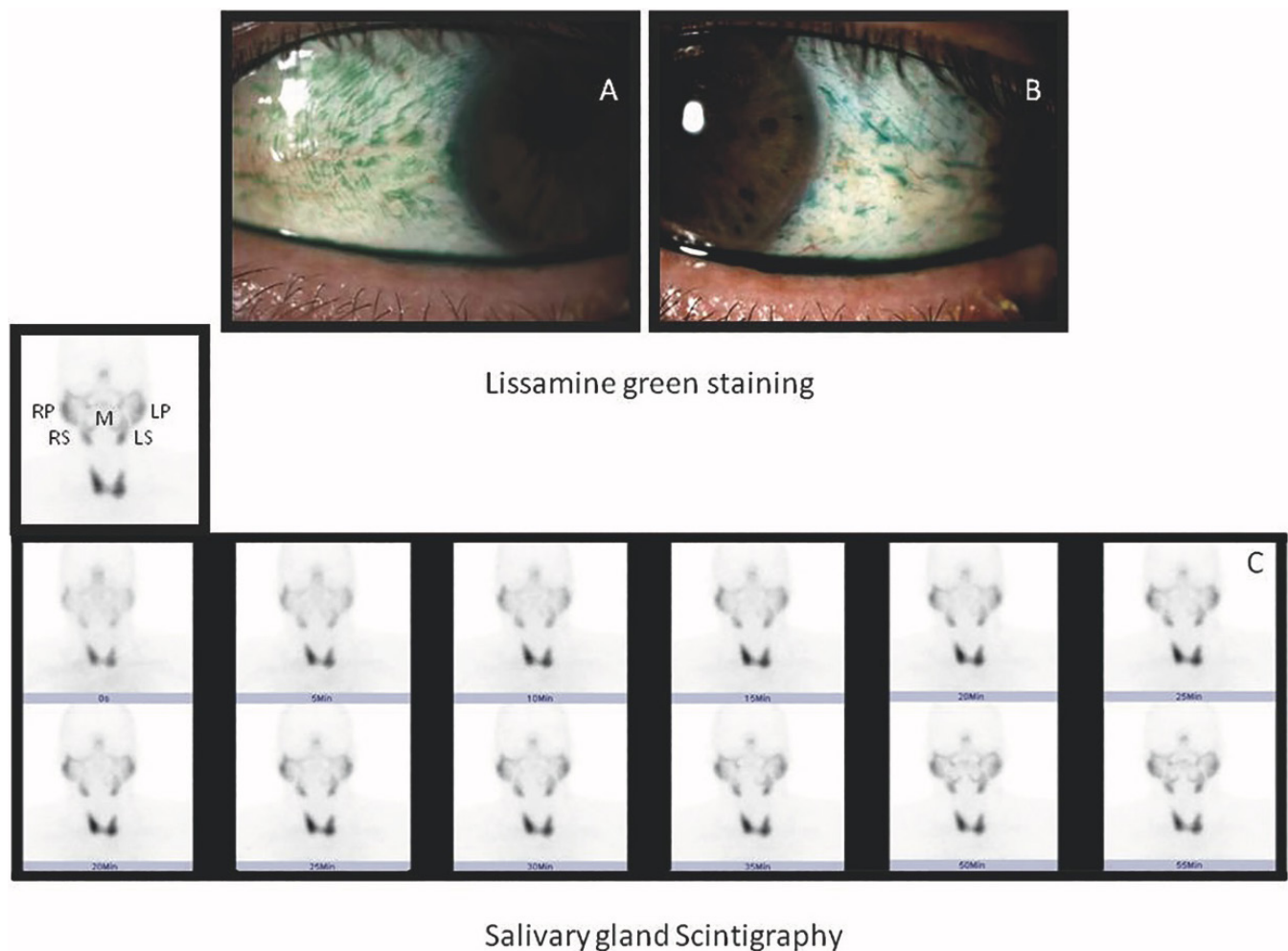


Fig. 1. 1A. Lissamine green staining temporal area ocular surface of right eye (0-3+): 1+. 1B. Lissamine green staining nasal area ocular surface of left eye (0-3+): 1+. 1C. The uptake and excretion of the radiotracer is delayed, without presence of activity in the mouth at the end of the study. RP: right parotid gland; LP: left parotid gland; RS: right submaxillary gland; LS: left submaxillary gland; M: mouth.

administration of mRNA COVID-19 vaccines have been recently reported (4). ITP is also linked to SS, especially in patients with positive anti-Ro antibodies, and has been reported as the first clinical manifestation of SS, even in patients without sicca symptoms (5). We report the first case of subclinical SS to become clinically apparent after severe ITP following administration of the first COVID-19 vaccine dose, that could be act as a trigger in an asymptomatic carrier of anti-Ro antibodies. Given the mass rollout of COVID-19 vaccines worldwide, and because SS is a common systemic autoimmune disease (6), similar cases can be increasingly expected, and we recommend testing for anti-Ro antibodies in people presenting with ITP following COVID-19 vaccination to rule out an underlying, subclinical SS. We believe that the systemic autoimmune disease unveiled in our patient following the COVID-19 vaccination cannot be considered as a side effect of the vaccine, but rather it could be the trigger of SS in an immunogenetically-predisposed person, since anti-Ro antibodies can be detected for up to 18-20 years before the diagnosis of primary SS (7).

M. RAMOS-CASALS¹, MD, PhD
M. SAINZ-DE-LA-MAZA², MD, PhD
A. MUXI³, MD, PhD

¹Department of Autoimmune Diseases, ICMiD, Hospital Clinic, Barcelona; ²Clínica Institute of Ophthalmology, ICOF, Hospital Clinic, Barcelona; ³Department of Nuclear Medicine, University of Barcelona, Hospital Clinic, Barcelona, Spain.

Please address correspondence to:
Dr. Manuel Ramos-Casals,
Department of Autoimmune Diseases,
Hospital Clínic, C/Villarroel 170,
08036 Barcelona, Spain.
E-mail: mramos@clinic.cat

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Competing interests: none declared.

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