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IMAGES IN RHEUMATOLOGY

Bywaters lesions

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We present the case of an 80-year-old male patient, with a personal history of arterial hypertension, type 2 diabetes mellitus and autoimmune hepatitis with chronic liver disease. He was being followed in a rheumatology appointment since the age of 72 for erosive rheumatoid arthritis (RA) which was negative for rheumatoid factor and positive for anti-citrullinated peptide antibodies (113 UA/mL), without extra-articular manifestations. He was being treated with subcutaneous methotrexate 20mg/week for RA with low disease activity (disease activity score-28 of 2.6) and prednisolone 5mg/day for autoimmune hepatitis. He was admitted for six days due to an upper respiratory co-infection with severe acute respiratory syndrome coronavirus-2 (SARS-CoV2) and respiratory syncytial virus (RSV) with type 1 respiratory failure. Methotrexate was transiently suspended, and he was treated with dexamethasone and supportive treatment with oxygen therapy. One week after discharge he developed painless periungual and subungual purpuric papules that progressed for 2 months (Figure 1). No other accompanying symptoms were present, such as fever, weight loss, anorexia, rhinorrhea, nasal obstruction, hearing loss, Raynaud's phenomenon, paresthesias, or focal neurologic deficits. He had no history of recent trauma. Laboratory findings revealed low acute phase reactants (erythrocyte sedimentation rate 16 mm in 1st hour, C-reactive protein 1.23mg/dL), normal complement levels (C3 105 mg/dL [90-180mg/dL] and C4 27.4 mg/dL [10-40mg/dL]) and normal urinary sediment. Serological tests for anti-neutrophil cytoplasmic antibodies, antiphospholipid antibodies, cryoglobulins, hepatitis B and C viruses and human immunodeficiency virus were negative. A transoesophageal echocardiogram excluded infectious endocarditis. Chest and abdominal computed tomography angiography excluded the presence of vascular aneurysms or other vascular lesions. Skin biopsy revealed small vessel vasculitis characteristic of Bywaters lesions. Nailfold capillaroscopy showed multiple abnormal shapes and absence of pericapillary haemorrhages, megacapillaries or avascular areas. Treatment with nifedipine 30mg/day and pentoxifylline 400mg/tid was initiated and immunosuppressive treatment with methotrexate 20mg/week and prednisolone 5mg/day was continued with

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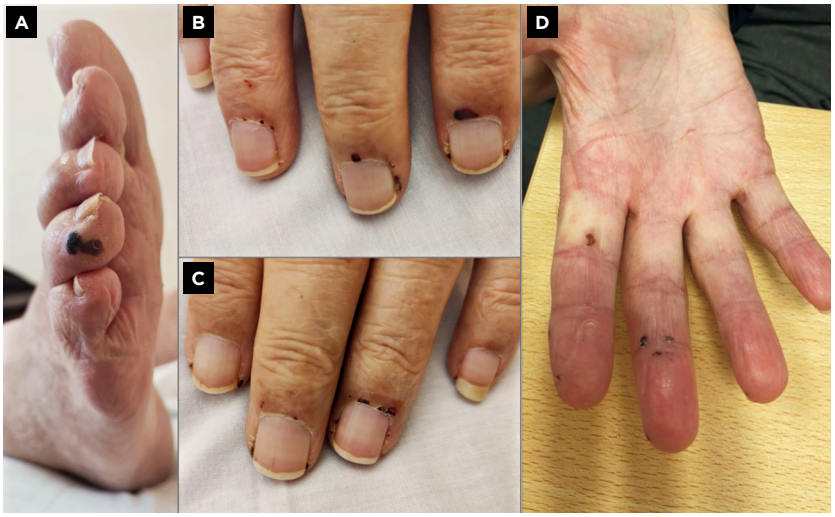

Figure 1. **A:** Bywaters lesion in the fourth finger of the right foot; **B and C:** Periungual Bywaters lesions in the right and left hand respectively; **D:** Bywaters lesions in the pulp of digits.

progressively complete resolution of cutaneous lesions. Bywaters lesions are a rare cutaneous manifestation of rheumatoid vasculitis typically affecting the nailfolds and digital pulps, not associated with systemic manifestations and usually follow a benign course. While a previous case report described a renal infarct due to medium-vessel vasculitis in a patient with rheumatoid arthritis following SARS-COV2 vaccination[1], this is to our knowledge the first report of Bywaters lesions following SARS-Cov2 and RSV infection.

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