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Letters to the Editor

Acquired partial lipodystrophy (Barraquer–Simons syndrome) and IgA nephropathy☆

Lipodistrofia parcial adquirida (síndrome de Barraquer-Simons) y nefropatía IgA

Dear Sir,

Lipodystrophy syndromes are a heterogeneous group of rare diseases characterised by selective loss of adipose tissue, which often leads to insulin resistance with a tendency to develop diabetes, dyslipidaemia, hepatic steatosis, acanthosis nigricans and hyperandrogenism.[1] Acquired partial lipodystrophy (APL; OMIM: 608709), also known as Barraquer–Simons syndrome, is one of the most common, and predominantly affects women (4:1). It is characterised by a progressive loss of subcutaneous fat, usually starting in childhood,[2] and progresses from the head down, affecting the face, upper limbs, trunk and abdomen. Unlike other types of lipodystrophy, insulin resistance and metabolic complications, apart from hepatomegaly (60%), are rare.[1,2]

In 10–20% of cases, APL is associated with autoimmune disorders, especially lupus. The most common complication (20%) is the development of membranoproliferative glomerulonephritis type 2, or dense deposit disease (DDD) approximately 8 years after onset of the disease. The pathogenesis of such renal involvement includes activation of the alternative complement pathway (ACP).[3] Patients show decreased serum C3 levels (70%) and are positive for C3NeF (80%),[2] an autoantibody capable of altering the ACP and in the case of APL, it is suspected to play a role in the destruction of fatty tissue.[4]

We had the case of a 15-year-old Caucasian girl with no relevant family or personal clinical history who was diagnosed of APL at the age of 5 due to progressive loss of subcutaneous fat from her face (Fig. 1a and b), with subsequent involvement of neck and shoulders. In her regular visits, no clinical or laboratory abnormalities had been observed, except for the slow progression of lipoatrophy and sustained decreased serum levels of C3 (26–48 mg/dl; VN: 86–184). She had never had clinical or analytical data suggestive of nephropathy, dyslipidaemia, insulin resistance or hyperandrogenism. Her serum leptin (8.03 ng/ml; NR: 15.3 ± 8.1 SD) and adiponectin (8.3 mg/ml; NR: 12.0 ± 3.1 SD) levels were slightly low and the DXA body composition study showed a reduction in total body fat (17.7%; NR: 25.9 ± 6.3).

At the age of 13, after three days of fever and in the context of acute gastroenteritis, she was found to have macroscopic haematuria with non-nephrotic proteinuria (13 mg/kg/day) and transient elevation of creatinine (maximum: 0.74 mg/dl). The pyrexia subsided 24 h later, but the macroscopic haematuria persisted for two weeks, with no other symptoms and with improvement in kidney function. Serum levels of IgA were found to be high (377 mg/dl; NR: 40–350), C3 remained low and C3NeF negative. Studies of autoimmunity (anti-thyroid, anti-neutrophil and anti-nuclear antibodies) were negative. Percutaneous kidney biopsy was performed one month after the haematuria resolved. The specimen contained 14 glomeruli and revealed the presence of focal and segmental mesangial hypercellularity (Fig. 1c): M1, E0, S0 and T0 according to the Oxford classification[5] (mesangial hypercellularity [M], endocapillary proliferation [E], segmental glomerulosclerosis [S] and interstitial fibrosis with tubular atrophy [T]). Only one of the glomeruli had a crescent that occupied 26–50% of the glomerulus. Immunofluorescence showed granular mesangial IgA and C3 deposits (Fig. 1d). Electron microscopy confirmed the presence of electron-dense deposits in the glomerulus, ruling out DDD. The patient was diagnosed with IgA nephropathy (IgAN), achieving clinical remission with spontaneous disappearance of the proteinuria and haematuria, but maintaining decreased serum levels of C3 (33 mg/dl) and increased serum IgA (353 mg/dl).

APL is a rare disease of uncertain aetiology. The association of APL with autoimmune diseases and DDD, in addition

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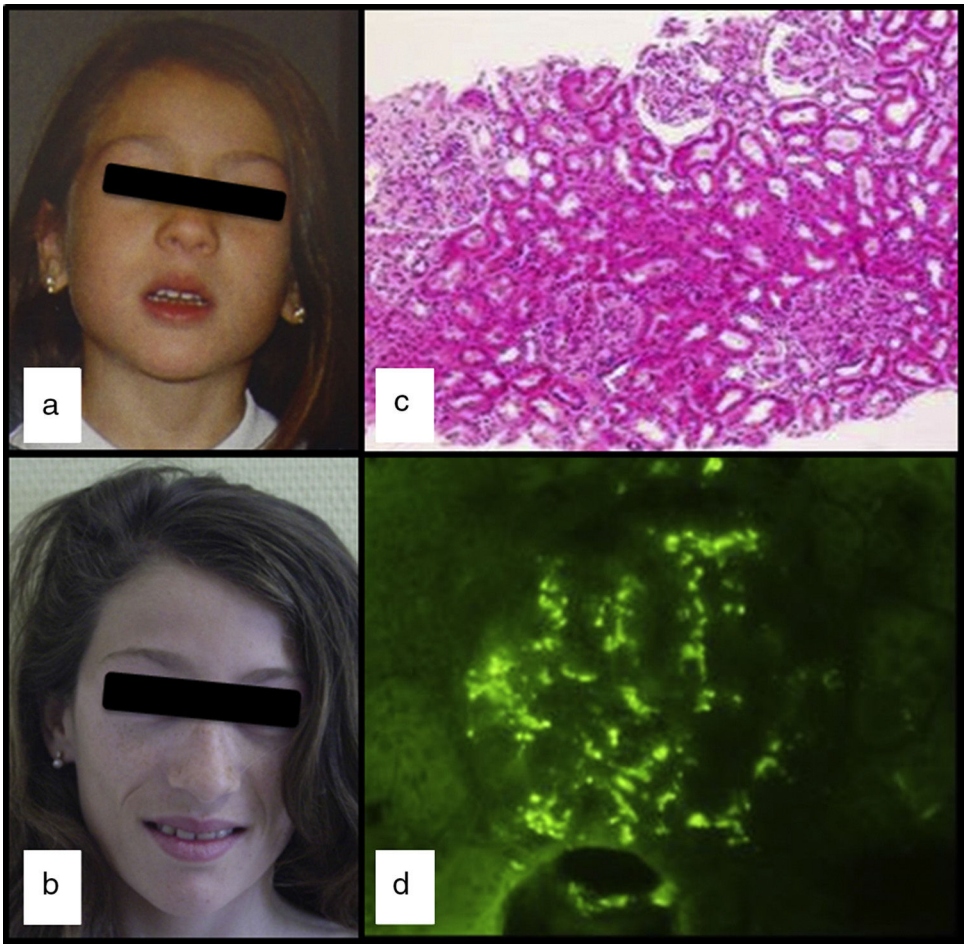

Fig. 1 – (a and b) Progression of the loss of facial fat; (c) Glomeruli with increased mesangial cellularity, and focal and segmental involvement (H&E ×100) and (d) Mesangial granular immunofluorescence with anti-IgA.

to the decrease in C3 and C3NeF positivity point to an autoimmune basis[2]; although a possible genetic predisposition has also been suggested.[6] IgAN, meanwhile, is the most common glomerular disease in the world.[7] The aetiopathogenesis of IgAN, which is not fully understood, also involves complement activation through the ACP[7–9] and sometimes through the lectin pathway.[10] Diagnosis is histological and kidney biopsy shows mesangial immune deposits of IgA1 with C3 and occasionally IgG or IgM. In the mesangial deposits, it is common to find components of the ACP (C3 and properdin), but not of the classic pathway (C1q and C4) which, taken together with normal serum C3 and other complement components, suggests that the complement activation occurs in the kidney itself.

To summarise, we present the first reported case of APL associated to IgAN. Although, given the incidence of IgAN, it could be a coincidence, the fact that the APL is often associated with nephropathy, the DDD, whose pathogenesis, like IgAN, involves activation of the ACP, raises the possibility of a common link between the two diseases.

Conflicts of interest

The authors declare that they have no conflicts of interest.

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Orange sputum in a kidney transplant patient with *Legionella micdadei* pneumonia☆

Esputo anaranjado en el contexto de neumonía por *Legionella micdadei* en un paciente trasplantado renal

Dear Sir,

We present the case of a 54-year-old male with a history of IgA nephropathy that has progressed to stage 5 chronic kidney disease, for which he received a cadveric kidney transplant in 2011. His immunosuppression treatment included: tacrolimus, mycophenolate mofetil (MMF) and prednisone, and he had a baseline creatinine level of 2.11 mg/dl. Two months prior to admission, he was started on treatment with corticosteroids at a dose of 1 mg/kg, subsequently in tapering regimen, due to a recent diagnosis of borderline rejection.

The patient was admitted to our hospital with respiratory failure in the context of bilobar pneumonia. Table 1 shows some of the patient's analytical parameters on admission.

The chest X-ray showed infiltrates in the right and left lower lobes. It was initially treated empirically with ceftriaxone and levofloxacin. Due to the poor clinical progress, the ceftriaxone was changed to meropenem, and the levofloxacin was withdrawn as the urinary antigen test for *Legionella pneumophila* (*L. pneumophila*) was negative. He was then also started on co-trimoxazole. The serial blood and sputum cultures obtained on admission were negative, as were the selective cultures for *Legionella*, *Nocardia* and fungi. The test for influenza A and B in nasopharyngeal aspirate was negative. Acid-fast bacillus staining and fluid and solid cultures also resulted negative. Quantitative PCR for the detection of cytomegalovirus in blood only revealed 93 CMV copies/ml.

Despite broad-spectrum antibiotic treatment, the patient remained febrile and had high oxygen requirements at day five after admission; thus, the treatment of immunosuppression with tacrolimus and MMF was discontinued. A bronchoscopy was performed with non-invasive ventilation, bronchoalveolar lavage (BAL) and tracheal aspirate were collected for cultures of conventional bacteria, *Pneumocystis jirovecii*, acid-fast bacilli and selective cultures for *Legionella*, *Nocardia*, fungi and mycobacteria.

On day 10, the patient's general condition deteriorated, with high fever (39.3 °C), coinciding with expectoration of a large amount of orange colour sputum (Fig. 1). We decided to add vancomycin and clindamycin to the treatment. Finally, on day 12 in hospital, colonies of *Legionella micdadei* (*L. micdadei*) were isolated in the BAL and tracheal aspirate cultures. All

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