Is an immunological dysfunction that damages vessel walls leading to thrombosis in Sneddon syndrome?

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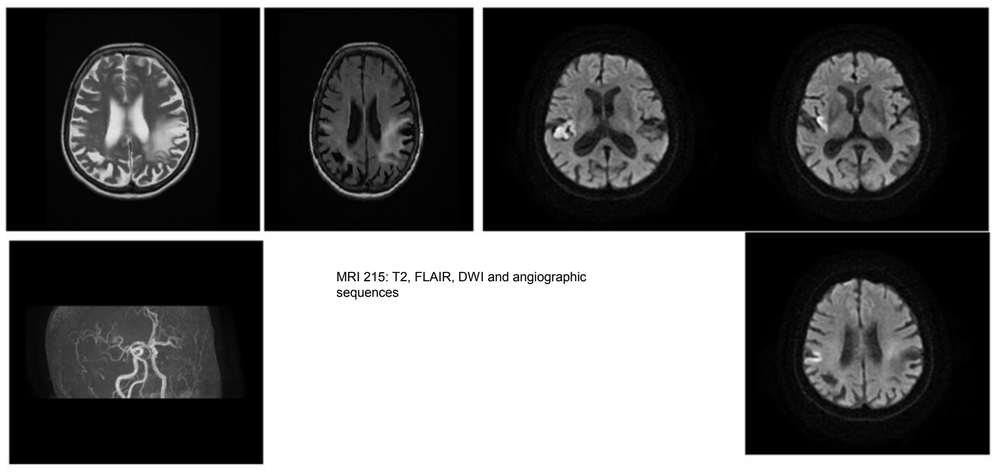
INTRODUCTION: Sneddon syndrome(SS) is a rare condition. The diagnosis is mainly based on clinical criteria and the exclusion of other etiologies. Common manifestations include hypertension, coronary artery disease, miscarriages, psychiatric disorders and arterial/venous thrombotic events. The main criteria for the diagnosis include livaedo racemosa, focal neurological deficits or evidence of stroke on MRI, characteristic vascular alterations on skin biopsy(1).

OBJECTIVE: assess the clinic-radiological pattern of SS and formulate an etio-pathogenetic hypothesis

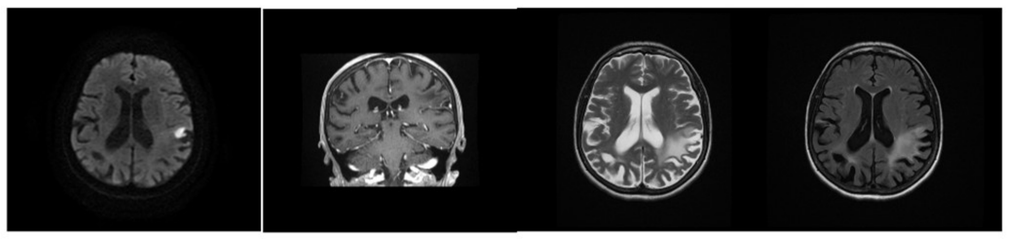
METHOD: We present the case of a woman with juvenile ischemic stroke with recurrences. She had joint rheumatism with "puff at heart" at 10 years old. She developed in jiuvenile age extensive livaedo racemosa, migraine, hypertension, mild kidney failure, autoimmune thyroiditis, depression. At the age of 40 years she had the first ischemic stroke and stroke recurrences at the age of 60 and 61 years, with a good clinical recovery. The cerebral MRI showed ischemic lesions in MCA territory bilaterally. Laboratory findings excluded collagen diseases, APL-syndrome, protein C/antithrombin III deficiency; she had mild protein S reduction. The histology of cutaneous lesions was aspecific. The patient assumed antiplatelet therapy (clopidogrel 75mg daily) at the time of the last stroke recurrence. We decided to change the prophylaxis with aspirin 300 mg and atorvastatin 40 mg daily. 18 months of follow up were negative for further ischemic recurrences.

***DISCUSSION and CONCLUSIONS**:* ADA2 (adenosine-deaminase) is a growth factor for endothelial cells and macrophage subset. In the absence of ADA2, endothelial cells appear damaged and express activation markers, such as E-selectin, with an overall loss of endothelial integrity. In the tissue, skewing toward proinflammatory M1 macrophages leads to accumulation of proinflammatory cytokines and tissue injury. The primary deficiency of key molecular regulators may lead to autoinflammation(2). Cutaneous findings associated with SS involve small/medium-sized dermal-subdermal arteries. In some patients demonstrates proliferation of the endothelium and fibrin deposits with obliteration of arteries. In many, included ours, the histopathologic examination doesn't show specific abnormalities, perhaps because of prophylaxis with ASA 300 mg and atorvastatin 40 mg daily. Treatment of skin ulcers in SS with alprostadil (ProstaglandinE1) is in favor of the autoimmune hypothesis (3;4)

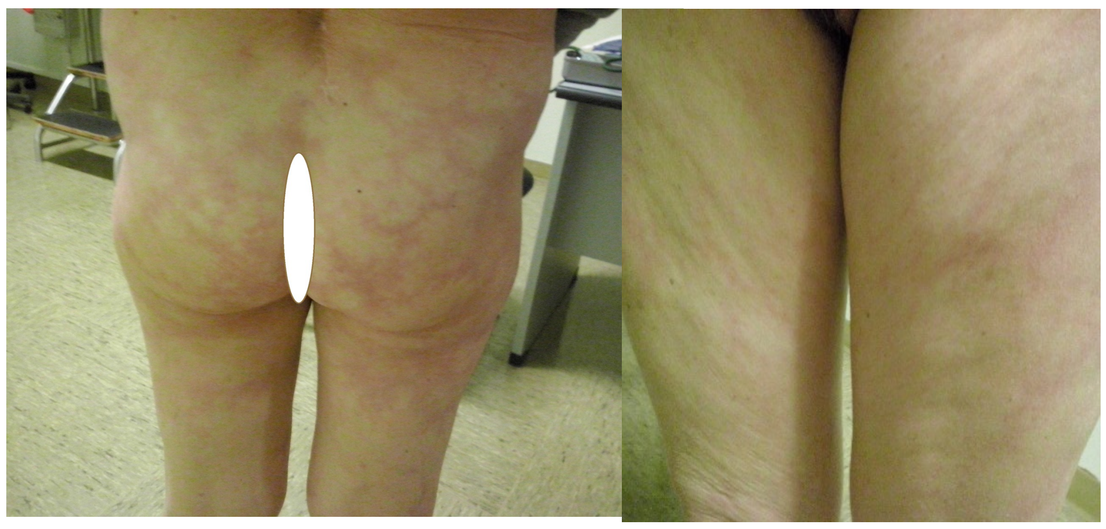
We have hypothesized that an immunological dysfunction damages vessel walls leading to thrombosis in ectodermic disease. Deficiency of a key immune regulatory element may lead to autoinflammatory or autoimmune disease, as in our patient. This case highlights the variability in the clinical presentation of SS and the possibility of diagnosing it before neurovascular events, attacking risk factors such as smoking, oral contraceptives, pregnancy. No specific diagnostic laboratory tests exist. The diagnosis is clinical and should be established as early as possible so as to prevent progression and potentially fatal systemic involvment

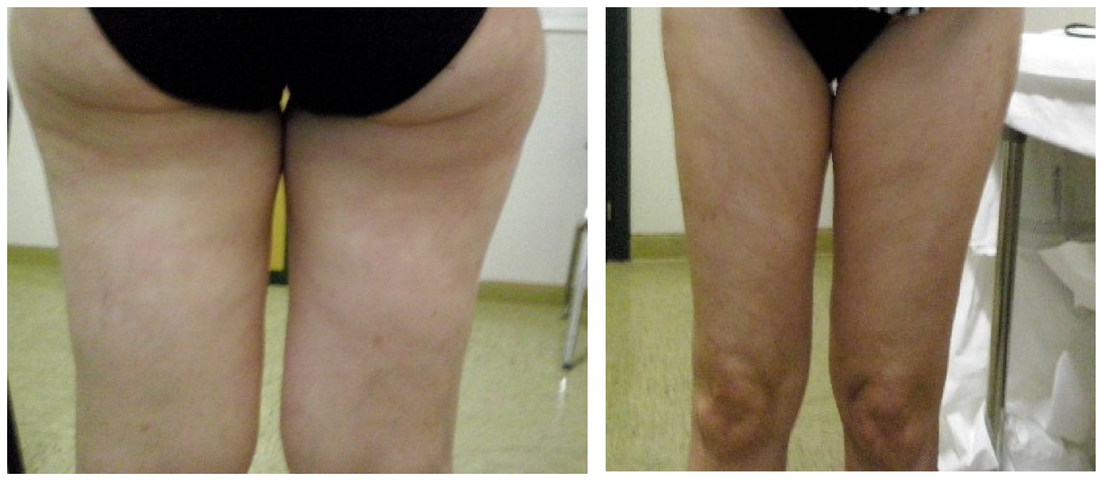


MRI 215: T2, FLAIR, DWI and angiographic sequences



MRI 2016: DWI, contrast-enhanced, T2 and FLAIR sequences





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