

TABLE 1. Time points of shoulder punctures, and correlation of total intra-articular cholesterol with three therapeutic interventions (bold)

T (weeks)	0	8	12	16	20	28
Therapeutic measures						
SSZ	2 g/dy start ^a	1 g/dy cont	1 g/dy cont	1 g/dy cont	stop cont	stop cont
MTX	10 mg sc	10 mg sc	10 mg sc	10 mg sc	10 mg sc	10 mg sc
MPA ia	0	0	1x ^b 40 mg ^b	0	0	0
Atorvastatine	0	0	0	start ^c 20 mg/dy	continue 20 mg/dy	cont 20 mg/dy
Shoulder puncture results						
Volume SF (ml)	80	50	30	130	12	0
Leucocyte count (10 ⁹ /l)	2.6	5.3	5.4	5.0	2.2	0
Cholesterol (mM)	7.8	7.4	7.8	12.9	5.9	0
Outcome parameters						
SF cholesterol (μmol)	624	370	234	1677	70	0
DAS ₂₈	5.1	3.3	3.3	3.1	2.7	1.9

^aStarting and subsequently continuing methotrexate (MTX), ^bintra-articular methylprednisolone acetate (MPA ia) injection, ^cstarting and subsequently continuing atorvastatine treatment.

Disease activity of RA is measured according validated scoring method applying 28 joint counts; interpretation: high disease activity when DAS₂₈ > 5.1; low activity when DAS₂₈ < 3.2.

g/dy = grams per day; cont = continue; sc = subcutaneous; ia = intra-articular; SF = synovial fluid.

by binding to a novel allosteric site within LFA-1 [5]. Another beneficial effect of statins may be the switch from Th1 to Th2 cytokines, as demonstrated for atorvastatine in a murine model [6]. Statins reduce CD40 expression in atheroma-associated cells in atherosclerotic lesions *in situ* in treated patients [7]. Fluvastatin has recently been shown to induce apoptosis *in vitro* in RA synoviocytes through a mitochondrial and caspase-3-dependent pathway and by inhibition of the geranylgeranyl pathway [8]. One may speculate that some of these previously proven mechanisms of action may be of relevance in the presented case.

Cholesterol crystalloids may appear as negatively birefringent, large, flat rectangular plates with notched corners, ranging from 8 to 100 μm, consisting of monohydrate cholesterol. These are thermodynamically stable and not easily cleared. This case lends support to the hypothesis that locoregional monohydrate cholesterol production or one of the aforementioned mechanisms (suppression of class II MHC or Th1–Th2 switch) play a pivotal role in the aetiopathogenesis of cholesterol synovitis, as cholesterol synovitis can be inhibited by atorvastatine in humans.

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Unilateral polymyalgia rheumatica with contralateral sympathetic dystrophy syndrome. A case of asymmetrical involvement due to pre-existing peripheral palsy

SIR, We describe the case of a man with pre-existing peripheral palsy who developed polymyalgia rheumatica (PMR); he was spared arthritis in the affected limb but experienced reflex sympathetic dystrophy syndrome (rSDS) in the paretic arm.

A 72-year-old man was admitted to our hospital because of nocturnal pain in his right shoulder and the pelvic girdle, with long-lasting morning stiffness, mild fever and weight loss. The pain in his buttocks and thighs was so severe that it limited his ability to stand and walk. His knee reflex responses were symmetrically reduced, and he was admitted to the Neurological Department with suspected paraparesis. The shoulder pain was not taken into account because the patient reported a diagnosis of rotator cuff tendinitis that had been made some days before by another physician.

The patient's history included left axilla irradiation performed 30 yrs ago because of a 'lymphogranuloma', which led to brachial plexus damage and peripheral palsy in the arm; the lymphoma did not relapse and the patient did not receive any other treatment.

The motor impairment in his left arm was nearly complete, although some degree of useless movement persisted. The sympathetic fibres were relatively spared, allowing the presence of sweat and vasomotor reflexes, and the arm retained some tactile, thermal and noxious sensitivity.

Neurological examination did not reveal any other gross abnormalities, and the administration of analgesics allowed the patient to stand and walk. He had mild fever (37.5°), an erythrocyte sedimentation rate (ESR) of 120 mm/h, and mild, normochromic and normocytic anaemia. He was subsequently referred to our department because of suspected PMR.

Rheumatoid factor (RF), anti-nuclear antibodies (ANA) and anti-neutrophil cytoplasm antibodies (ANCA) were negative, and muscle enzymes were normal. The patient denied headache or visual abnormalities, and the results of a temporal biopsy were normal. A scan revealed increased Tc^{99} uptake in the right but not the left shoulder (Fig. 1).

The prednisolone (25 mg/day) led to the prompt disappearance of the right shoulder and pelvic girdle pain, the normalization of body temperature and ESR (25 mm/h). Tapering was started after 1 month.

One month later, left hand was affected by a painful pitting swelling, accompanied by a glossy and bluish skin, continuous sweating and thermal disturbances. Radiology showed spotty

atrophy and the Tc^{99} scan, which had previously been symmetrical and normal at the hands, showed increased vascular flow and bone activity in the affected area. Rx pattern was consistent with the diagnosis of rSDS. Biphosphonate therapy with clodronate was started, and 1 month later led to improved symptoms and reduced oedema.

PMR is an inflammatory disease that variably involves the upper and lower girdle, but has a well-defined symmetry [1].

To the best of our knowledge, there is only one previously published report of a case of PMR leading to established central hemiparesis [2] with the sparing of the affected site.

In our case, the patient's complaint and the scintigraphy results explain the unilateral involvement of the upper girdle. The presence of brachial palsy may have had a protective effect on the appearance of arthritis in the affected limb, but the altered neural control induced rSDS.

It has been reported that central [3] or peripheral denervation [4] can protect against rheumatoid arthritis (RA). Pre-existing denervation can avoid the emergence of arthritis and erosions in the paretic limbs and, when the neural defect occurs after established RA, it can also ameliorate synovitis [5], and even induce erosion recovery [6]; the more severe the neurological damage, the more pronounced the sparing effect.

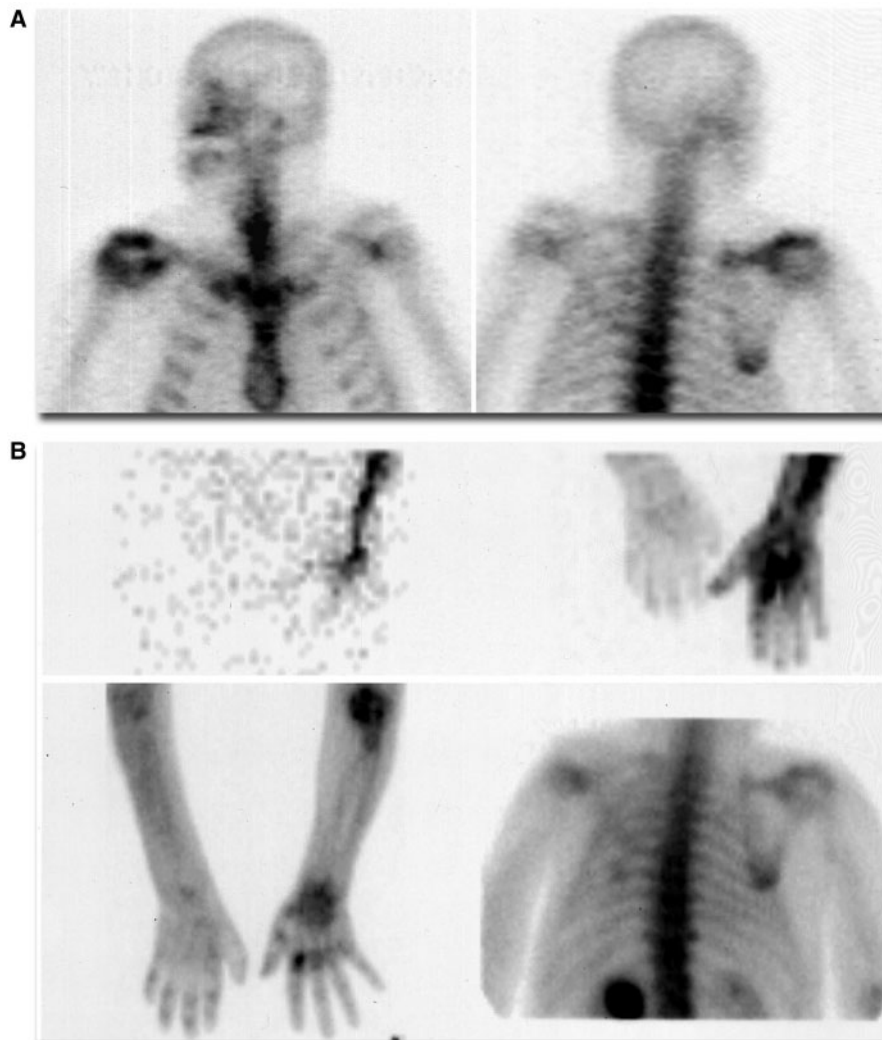


FIG. 1. (A) Bone scintigraphy showing the main uptake in the right shoulder and (B) the Tc^{99} scan of the hands showed increased vascular flow and bone activity of the affected area. From upper left to lower: increased vascular flow; blood pool; increased uptake at steady state; persistence of inflammation of right shoulder.

A number of previous reports [3, 4, 7] suggested that the lack of mobilization and/or reduced vascular supply in the denervated limb may explain this sparing effect, but it is currently believed that the functional or anatomical reduction in nervous fibres is the common, necessary and sufficient underlying reason.

The nervous system plays an active role in inflammation, which it can induce in experimental and human models (neurogenic inflammation) by producing and releasing neuropeptides. Neurogenic inflammation may amplify immune complex-dependent inflammation, and a number of observations suggest that the nervous system plays a role in generating and maintaining arthritis [8]. Various neuropeptides can control the milieu by interacting with the surrounding and circulating cells, regulating the activity of the immune system (and its dependent production of cytokines) as well as vascular tone [9].

rSDS is a pathological condition due to hyperactivity of the autonomic nervous system; it is frequently triggered by noxious stimuli or interference with central nervous outflow (strokes, the use of anti-convulsants), and mechanisms of neurogenic switch are involved in its appearance [7]. There is only one previously published case of rSDS complicating PMR [10].

Sympathetic fibres are characterized by low-grade activation, which is increased by activity in the primary afferent nociceptive nerves, and some conditions due to an abnormal increase in this activity (frequently triggered by noxious stimuli or CNS interference due to ischaemic or pharmacological insults) can lead to rSDS.

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Traditional cardiovascular risk factors in primary Sjögren's syndrome—role of dyslipidaemia

SIR, The development of precocious atherosclerosis with its consequences on cardiovascular (CV) mortality in some rheumatic diseases, such as rheumatoid arthritis (RA) and systemic lupus erythematosus (SLE), is well established [1]. Although there is evidence that both the disorders represent an independent risk factor for CV disease, it is thought that traditional risk factors, including dyslipidaemia, also may contribute to accelerated atherosclerosis in these patients [1]. Primary Sjögren's syndrome (SS) is a systemic autoimmune disorder characterized by chronic inflammation of exocrine glands. Although it is not clear if an increase in CV death occurs in this disorder [2], SS may represent an interesting model to study the factors involved in early development of atherosclerosis. It shares, indeed, a number of clinical and serological features typical of both RA and SLE, but, unlike these disorders, it does not often need treatments, which may influence the CV risk profile of these subjects, because of a frequently indolent course of the disease.

Lodde *et al.* [3] recently described lower levels of total and high-density lipoprotein (HDL) cholesterol in patients with primary SS with respect to those of xerostomic control subjects. This datum confirms, at least in part, the results of our study showing reduced levels of HDL, but not total, cholesterol in 37 women with primary SS compared with 35 age-matched control females ([4] and Table 1). Similar to the Lodde's study, we failed to find differences in low-density lipoprotein (LDL) cholesterol, triglycerides, non-HDL cholesterol, total/HDL and LDL/HDL cholesterol ratio and high-risk HDL cholesterol levels between patient and control groups (data not shown). It is intriguing, however, that an association between anti-SSA/SSB antibodies and altered cholesterol levels was found in the Lodde's study. We performed, therefore, a *post hoc* analysis of lipid levels in our series by selecting the SS patient subset with evidence of circulating anti-SSA (71% also anti-SSB+). As shown in Table 1, the patients with anti-SSA/SSB antibodies had lower levels of total and HDL cholesterol and increased high-risk HDL cholesterol levels than control subjects, thereby confirming an association between dyslipidaemia and SS-specific autoantibodies.

The finding of dyslipidaemia, and in particular low level of HDL cholesterol in SS, is of great interest, but raises some critical questions. As reminded by Lodde, similar findings have been found in both RA and SLE and it is conceivable that they may be the results of chronic inflammation. However, we do not believe that the presence of specific autoantibodies, such as anti-SSA/SSB, may reflect SS disease activity, as Lodde states. Unlike RA, where higher levels and frequent peaks of inflammation often occur, primary SS is usually characterized by chronic but milder inflammation than RA, as our study confirms [4]. This may justify the lack of correlation between HDL cholesterol and C-reactive protein [3], also confirmed in our series (data not shown). Although there are not yet established criteria of disease activity in SS, anti-SSA/SSB antibodies represent a disease marker useful to define the diagnosis, more than the activity of the disease. It has been shown, however, that these autoantibodies identify younger SS patients at the