

# Letters to the Editor

## Jaccoud's arthropathy with vasculitis and primary Sjögren's syndrome. A new entity

Sirs,

Jaccoud's arthropathy was first described by Jaccoud in 1866 in patients with rheumatic fever (1). A similar arthropathy has been reported in patients with various connective tissue diseases including primary Sjögren's syndrome (2-4) and systemic necrotizing vasculitis (5-6). We describe four cases of Jaccoud's arthropathy in patients with primary systemic Sjögren's syndrome and cutaneous vasculitis. We suggest that Jaccoud's arthropathy with vasculitis and Sjögren's syndrome (JAVS) may be a new entity.

We defined Jaccoud's arthropathy as reducible or fixed deviation of the fingers from the metacarpal axes, according to the description by Bywaters (2) modified by Kahn (7). This definition was met by 5 patients in a group of 161 patients fulfilling European classification criteria for primary Sjögren's syndrome (8). Four of these 5 patients had cutaneous manifestations suggesting vasculitis, and 1 had pulmonary fibrosis. Among the 4 patients with cutaneous manifestations, there were 3 men and 1 woman, with a mean age at Sjögren's syndrome onset of  $58.3 \pm 14.1$  years (range, 46-77) and a mean disease duration of 14.7

$\pm 10.9$  years (range, 4-29 years). Radiographs of the hands and feet showed metacarpophalangeal subluxation, joint space narrowing, and metacarpal hook deformity, without erosions in the wrist or finger joints. The main features in the 4 patients are summarized in Table I. HLA typing was not performed at diagnosis or during follow-up.

These 4 cases suggest that the combination of Jaccoud's arthropathy with polyarthritis, cutaneous vasculitis, and primary Sjögren's syndrome may not be fortuitous. Rather, it may represent a distinct entity. All 4 patients met 1987 American College of Rheumatology criteria for rheumatoid arthritis. However, the absence of erosions despite prolonged follow-up (mean, 14.75 years; range, 4-29 years) strongly militates against a diagnosis of rheumatoid arthritis. Anti-CCP antibodies were present in patient 1 (and anti-AKA and -APF in patient 3), but are not entirely specific for RA, as they have been described in 15% of patients with primary Sjögren's syndrome (9).

In all 4 patients, Jaccoud's arthropathy manifested as finger joint hypermobility with reducible ulnar deviation and swan-neck deformities. Cutaneous rheumatoid nodules were not present in any of the patients. Jaccoud's arthropathy has been described in patients with primary Sjögren's syndrome (2, 4), but the prevalence

is only 2% among the 50 patients who have received at least 12 years of follow-up for primary Sjögren's syndrome at our clinic.

All 4 patients had cutaneous manifestations, consisting of a maculopapular rash, leg ulcer, or purpura, with histological features of granulomatous or leukocytoclastic vasculitis (2 biopsies). Cutaneous vasculitis (10) has been described in 20% to 30% of patients with primary Sjögren syndrome (21% in our series).

Polyarthritis was present in 13 out of 15 patients with vasculitis and primary Sjögren's syndrome in a subgroup of 71 of our patients with long-term follow-up. However, Jaccoud's arthropathy was uncommon in this subgroup.

The mechanism of vasculitis in our patients is unclear. Hypergammaglobulinemia was found in only 2 patients and cryoglobulinemia in none. A single patient had mild hypocomplementemia.

Jaccoud's arthropathy has been reported in patients who had hypocomplementemic urticarial vasculitis without cryoglobulinemia, an entity also known as McDuffie vasculitis. None of these patients had symptoms of Sjögren's syndrome.

We conclude from our literature review that the combination of Jaccoud's arthropathy with cutaneous vasculitis and primary Sjögren's syndrome, of which a single case has been described previously, may deserve individualization as a new entity. Conceiv-

**Table I.** Main features in four patients with Jaccoud's arthropathy, cutaneous vasculitis, and primary Sjögren's syndrome.

Patient	Sex	Age at onset of JA	Age at JAVS diagnosis	Clinical manifestations	Positive autoantibody tests	Radiographs	Biopsy	Follow-up (years)
1	M	42	46	<ul style="list-style-type: none"> <li>• Sicca symptoms</li> <li>• Symmetric polyarthritis</li> <li>• Jaccoud's hands and feet</li> <li>• Maculopapular rash</li> <li>• Joint hypermobility</li> <li>• Pulmonary restrictive syndrome</li> </ul>	<ul style="list-style-type: none"> <li>• RF+</li> <li>• AKA+</li> <li>• APF+</li> <li>• aCCP+</li> <li>• Normal complement</li> </ul>	<ul style="list-style-type: none"> <li>• No erosions</li> <li>• MCP, PIP deformities</li> <li>• MTP deformities</li> </ul>	<ul style="list-style-type: none"> <li>• Chisholm III</li> <li>• Leukocytoclastic vasculitis</li> </ul>	17
2	F	58	61	<ul style="list-style-type: none"> <li>• Sicca symptoms</li> <li>• Symmetric polyarthritis</li> <li>• Jaccoud's hands</li> <li>• Joint hypermobility</li> <li>• Maculopapular rash</li> </ul>	<ul style="list-style-type: none"> <li>• RF+</li> <li>• ANA+</li> <li>• Hypocomplementemia</li> <li>• Hypergammaglobulinemia</li> </ul>	<ul style="list-style-type: none"> <li>• No erosions</li> <li>• MCP, PIP deformities</li> </ul>	<ul style="list-style-type: none"> <li>• Chisholm III</li> <li>• Leukocytoclastic vasculitis</li> </ul>	4
3	M	71	77	<ul style="list-style-type: none"> <li>• Sicca symptoms</li> <li>• Symmetric polyarthritis</li> <li>• Jaccoud's hands</li> <li>• Joint hypermobility</li> <li>• Cutaneous leg ulcer</li> <li>• MALT B-cell lymphoma</li> </ul>	<ul style="list-style-type: none"> <li>• RF+</li> <li>• AKA+</li> <li>• APF+</li> <li>• ANA+</li> <li>• SSA+</li> <li>• SSB+</li> <li>• Hypergammaglobulinemia</li> <li>• M. component</li> </ul>	<ul style="list-style-type: none"> <li>• No erosions</li> <li>• MCP, PIP deformities</li> </ul>	<ul style="list-style-type: none"> <li>• Chisholm III</li> <li>• Cutaneous capillaritis</li> <li>• B-cell lymphoma (parotid gland)</li> </ul>	9
4	M	44	49	<ul style="list-style-type: none"> <li>• Sicca symptoms</li> <li>• Symmetric polyarthritis</li> <li>• Jaccoud's hands</li> <li>• Cutaneous purpura</li> <li>• B-cell lymphoma</li> </ul>	<ul style="list-style-type: none"> <li>• RF+</li> </ul>	<ul style="list-style-type: none"> <li>• No erosions</li> <li>• MCP, PIP deformities</li> </ul>	<ul style="list-style-type: none"> <li>• B-cell lymphoma (axillary lymph node)</li> </ul>	29, died

JA: Jaccoud's arthropathy; JAVS: JA with vasculitis and Sjögren's syndrome; RF: rheumatoid factor; AKA: antikeratin antibody; APF: antiperinuclear factor; aCCP: anti-cyclic citrullinated peptide antibody; ANA: antinuclear antibodies; MCP: metacarpophalangeal joints; PIP: proximal interphalangeal joints; MTP: metacarpophalangeal joint.

ably, vasculitis might lead to capsule and ligament deformity and, thereby, to Jaccoud's deformity. This possibility deserves to be studied. We suggest the acronym "JAVS" to designate this syndrome.

M. BALLARD<sup>1</sup>  
O. MEYER<sup>1</sup>  
H. ADLE-BIASSETTE<sup>2</sup>  
M. GROSSIN<sup>3</sup>

<sup>1</sup>Department of Rheumatology, Bichat Teaching Hospital, Paris; <sup>2</sup>Department of Pathology, Bichat Teaching Hospital, Paris; <sup>3</sup>Department of Pathology, Louis-Mourier Teaching Hospital, Colombes, France.

Address correspondence to: Prof. Olivier Meyer, Service de Rhumatologie, Hôpital Bichat, 46 rue Henri Huchard, 75018 PARIS, France.  
E-mail: olivier.meyer@bch.ap-hop-paris.fr

## References

- JACCOUD FS: Sur une forme de rhumatisme chronique. In "Leçons de clinique médicale faites à l'Hôpital de la Charité" (1866). Delahaye, Paris 1867: 598-616
- BYWATERS EGL: Jaccoud's syndrome. A sequel to the joint involvement of systemic lupus erythematosus. *Clin Rheumatic Dis* 1975; 1: 125-48.
- M'RAD S, BEN MILED K, MAKNI S *et al.*: Jaccoud's arthropathy in primary Sjögren's syndrome with benign hypergammaglobulinaemic purpura. *Eur J Med* 1993; 6: 373-5.
- NAVRATIL J, STORKOVA A: Un cas de syndrome de Gougerot-Sjögren associé à une calcinose interstielle diffuse et à une arthropathie de Jaccoud. *Rev Rhum* 1994; 61: 649-55.
- DE LA SOTA M, MALDONADO COCCO JA: Jaccoud's arthropathy in a patient with necrotizing vasculitis. *J Rheumatol* 1992; 19: 998-1000.
- WISNIESKI JJ, BAER AN, CHRISTENSEN J *et al.*: Hypocomplementemic urticarial vasculitis syndrome: clinical and serologic findings in 18 patients. *Medicine* 1995; 74: 24-41.
- KAHN MF: Jaccoud's syndrome in a rheumatology unit. *Clin Rheum in Practice* 1986; ii: 953-5.
- VITALI C, BOMBARDIERI S, MOUTSOPOULOS HM *et al.*: Preliminary criteria for the classification of Sjögren's syndrome. Results of a prospective concerted action supported by the European community. *Arthritis Rheum* 1993; 36: 340-7.
- GOTTENBERG JE, MIGNOT-GROOTENBOER S, COHEN-SOLAL J *et al.*: 15% prevalence of anti-cyclic citrullinated peptide (CCP) antibodies in patients with primary Sjögren's syndrome. *Ann Rheum Dis* 2005; 64: 114-7.
- BERNACCHI E, AMATO L, PARODI A *et al.*: Sjögren's syndrome: a retrospective review of the cutaneous features of 93 patients by the Italian Group of immunodermatology. *Clin Exp Rheumatol* 2004; 22: 55-62.

## Sustained 3-year remission after rituximab treatment in a patient with refractory Wegener's granulomatosis

Sirs,

A 37-year-old woman was admitted in March 2001 because of purpuric rash, diarrheas, arthralgias and edema of the lower legs. Laboratory examinations revealed:

Hb: 10.2 g/dl, WBC: 9000/mm<sup>3</sup>, PLT: 295000/mm<sup>3</sup>, ESR: 68 mm/h, CRP: 2.5 mg/l (normal range 0-0.5), creatinine: 1.1 g/l, liver enzymes: normal. Urine tests showed 30-40 RBC/hpf and 4-5 WBC/hpf. A 24h urine collection yielded 6.2 gr of protein. Blood, urine and stool cultures were negative. Antinuclear and anti-DNA antibodies, ANCA by indirect immunofluorescence and cryoglobulins were negative. Chest X-Ray was normal. A kidney biopsy showed segmental glomerulonephritis with necrotic and crescentic changes and subtle IgA and IgM deposits. Skin biopsy revealed leukocytoclastic vasculitis. A preliminary diagnosis of small vessel vasculitis was made and the patient received treatment with intravenous cyclophosphamide 1 gr and 3 pulses of methylprednisolone 1 gr daily followed by oral methylprednisolone 24 mg daily. Fever, diarrheas and skin rash improved. One month later, treatment with mucophenolate mofetil 2 gr daily was started. In August 2001 the patient was readmitted because of fever, cough and purpuric rash. Chest X-Ray showed pulmonary nodules bilaterally and a 4-cm cavitory lesion in the right lower lobe. Infectious causes were excluded. Mucophenolate mofetil was stopped and monthly pulses of cyclophosphamide 1gr/m<sup>2</sup> in combination with oral methylprednisolone 32 mg daily were started. Two months later she complained again for fever and was admitted to our hospital. Physical examination showed a deep mouth ulcer, palpable purpura on both legs and 3 skin ulcers with a diameter of 2-3 cm. Anemia, high ESR and CRP values, microscopic hematuria and 24-h proteinuria of 1 gr were detected. ANCA were found negative by indirect immunofluorescence as well as by ELISA. A diagnosis of Wegener's granulomatosis was made on the evidence of lung nodules and cavitory lesion, necrotizing glomerulonephritis, mouth ulcers and leukocytoclastic vasculitis of the skin. The patient received therapy with oral cyclophosphamide 100 mg daily, methylprednisolone 40 mg daily and trimethoprim-sulfamethoxazole 960 mg twice daily with gradual improvement of her symptoms.

Five months later, she relapsed with nephrotic range proteinuria, red blood cell casts and a 3-cm diameter skin ulcer of the left leg. Cyclophosphamide treatment was discontinued. She received 4 weekly infusions of 375 mg/m<sup>2</sup> of rituximab as previously described (1) while the dosage of methylprednisolone remained stable at 16 mg daily. No side effects were noticed. Two months later she was in complete remission regarding the Birmingham Vasculitis Activity Score modified for Wegener (2). Currently, 3 years after rituximab treatment, she remains in full remission receiving treatment with methylprednisolone 1 mg

every other day and trimethoprim-sulfamethoxazole 960 mg daily.

This is a case of refractory Wegener's granulomatosis treated effectively with anti-CD20 therapy. Our patient had segmental necrotizing glomerulonephritis, lung nodules and cavitory lesions, mouth ulcers and leukocytoclastic vasculitis but negative ANCA. Cytoplasmic ANCA and proteinase 3 reactions have 98% specificity in Wegener's granulomatosis, however, their sensitivity varies from 30% to 99% depending of the extent, severity and activity of the disease.

Anti-CD20 therapy has been used in several autoimmune diseases the last years (3-5). The successful use of B lymphocyte depletion therapy in Wegener's granulomatosis has also been recently described (1, 6-8). Remission was maintained as long as B lymphocytes remained undetectable. In almost all the above cases, the duration of follow-up period was approximately 1-1.5 years (1, 6-8). In our patient with refractory Wegener's granulomatosis and negative ANCA, remission persisted for 3 years after rituximab treatment. This case suggests that the use of B cell depletion therapy may induce sustained remission in refractory Wegener's granulomatosis.

M.G. TEKTONIDOU  
F.N. SKOPOULI

Department of Internal Medicine, Euroclinic Hospital, Athens, Greece.

Address correspondence to: Maria G Tektonidou, MD, Euroclinic Hospital, 9 Athanasiadou str, 115 21, Athens, Greece.  
E-mail: balts@otenet.gr

## References

- SPECKS U, FERVENZA FC, MC DONALD TJ, HOGAN MC: Response of Wegener's granulomatosis to anti-CD20 chimeric monoclonal antibody therapy. *Arthritis Rheum* 2001; 44: 2836-40.
- STONE JH, HOFFMAN GS, MERKEL PA *et al.*: A disease-specific activity index for Wegener's granulomatosis: modification of the Birmingham Vasculitis Activity Score. *Arthritis Rheum* 2001; 44: 912-20.
- CHAMBERS SA, ISENBERG D: Anti-B cell therapy (rituximab) in the treatment of autoimmune diseases. *Lupus* 2005; 14: 210-4.
- ARMSTRONG DJ, WRIGHT SA, FINCH MB, TAGAART AJ, BELLAL: Active systemic lupus erythematosus successfully treated with rituximab and oral steroids. *Clin Exp Rheumatol* 2004; 22: 787-8.
- KEYSTONE EC: Safety issues related to emerging therapies for rheumatoid arthritis. *Clin Exp Rheumatol* 2004; 22 (Suppl. 35): S148-50.
- ERIKSSON P: Short-term outcome and safety in 5 patients with ANCA-positive vasculitis treated with rituximab (abstract). *Kidney Blood Press Res* 2003; 26: 294.
- JAYNE DR, BURNS S, SMITH K: B-cell depletion with rituximab for refractory vasculitis (abstract). *Kidney Blood Press Res* 2003; 26: 294.
- KEOGH KA, WYLAM ME, STONE JH, SPECKS U: Induction of remission by B Lymphocyte depletion in eleven patients with refractory antineutrophil cytoplasmic antibody-associated vasculitis. *Arthritis Rheum* 2005; 52: 262-8.