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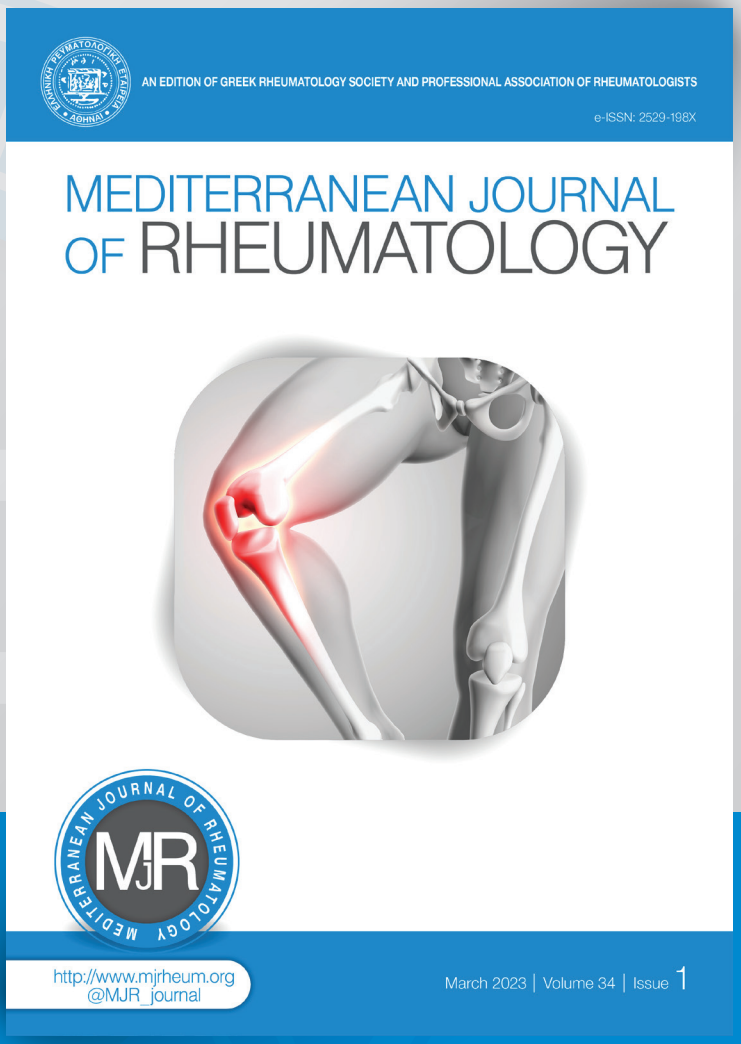

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LETTER TO THE EDITOR

Organising Pneumonia as an Initial Manifestation of Rheumatoid Arthritis: A Case Report and Review of Literature

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Dear Editor,

Interstitial lung disease (ILD) is a frequent extra-articular manifestation of rheumatoid arthritis (RA), which usually manifests several years after the onset of articular symptoms. However, less than 10% of RA patients have ILD as an initial manifestation.[1,2] Organising pneumonia (OP) preceding articular manifestations of RA is extremely uncommon with only few cases reported.[1-8]

A 28-year-old female with three months of gestation, presented with dry cough for one year, and symmetrical inflammatory polyarthritis involving small and large joints of all the extremities for one month. Examination revealed multiple tender joints, and swollen left wrist joint. Fine inspiratory crepitations were heard on auscultation over both the lungs. Rest of the physical examination was normal.

On evaluation, complete blood counts, urine examination, creatine phosphokinase, renal and liver function tests were normal. Computed tomography imaging of the chest (performed five months prior to the present presentation) was suggestive of OP (**Figure 1**). C-reactive protein was elevated, rheumatoid factor (RF) was positive (20 times above normal limit), and anti-cyclic citrullinated peptide antibodies (ACPA) were negative. Anti-nuclear antibodies by indirect immunofluorescence on Hep-2 cells at 1:100 titre showed fine speckled nuclear pattern. Line immunoassays for myositis specific/associated and anti-extractable nuclear antigen antibodies were negative. Anti-neutrophilic cytoplasmic antibodies were negative, and serum complement (C3, C4) levels were normal. Forced vital capacity on spirometry was 80%. Sputum did not yield any pathogenic organisms. Polymerase chain reaction for mycobacterium tuberculosis antigen in the sputum was negative. Lung biopsy was

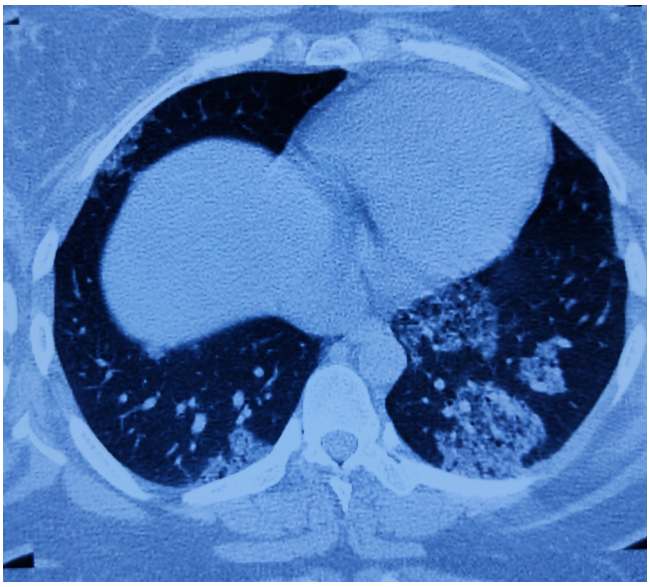

Figure 1. Organising pneumonia.
Computed tomography of the chest showing multiple consolidations with central ground glassing (reverse halo sign), predominantly in the peripheral and subpleural locations in both the lungs.

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Table 1. Previously reported cases of rheumatoid arthritis with organising pneumonia as an initial manifestation.

Author	Age	Sex	Arthritis onset after OP (months)	RF at onset of OP	RF at onset of arthritis	ACPA at onset of OP	ACPA at onset of arthritis	Treatment
Kalinova et al.[3]	56	F	4	+	+	+	+	MP 40 mg
Hoshino et al.[4]	71	M	0.75	+	+	+	+	Pred 30 mg
Kinoshita et al.[1]	58	M	24	+	+	+	+	Pred 40 mg
Komiya et al.[2]	86	F	8	+	+	+	+	Pulse steroid
Cavallasca et al.[5]	65	M	6	-	+	NA	+	Pred 80 mg
Ippolito et al.[6]	68	F	0.5	NA	+	NA	NA	Pred 60 mg
Henriet et al.[7]	69	F	8	NA	+	NA	+	Pred 1 mg/kg
	33	F	3	NA	+	NA	+	Pred 40 mg
Mori et al.[8]	41	F	32	+	+	+	+	Pred 40 mg
	53	M	27	+	+	+	+	Pulse followed by Pred 50 mg
	65	F	4	+	+	+	+	Pulse followed by Pred 50 mg
This case	28	F	11	NA	+	NA	-	Pred 30 mg

F: Female; M: Male; MP: Methylprednisolone; Pred: Prednisolone; OP: Organising pneumonia; RA: Rheumatoid arthritis; RF: Rheumatoid factor; ACPA: Anti-cyclic citrullinated peptide antibodies.

deferred, as the clinical and radiological characteristics of the lung lesions were consistent with OP. With a diagnosis of seropositive RA with ILD, patient received oral prednisolone 30 mg/day (with tapering of 5 mg every fortnightly), and sulfasalazine 2 gms/day. Within next few days, her pulmonary and articular symptoms subsided.

OP is a type of ILD, histologically characterized by buds of granulation tissue within the bronchioles and alveoli.[6] It is called cryptogenic OP when the etiology remains uncertain, and secondary OP when associated with infections, drugs, and connective tissue diseases including RA.[9] Compared with other types of ILD seen in RA, such as nonspecific interstitial pneumonia and usual interstitial pneumonia, OP is less common and has better prognosis.[8] Occasionally OP may resolve spontaneously. However, most of the patients require glucocorticoids, which is the standard of care. Cyclophosphamide can be used in patients not responding to corticosteroids.[10]

PubMed search with terms “rheumatoid arthritis” AND (“organising pneumonia” OR “organizing pneumonia” OR “organising pneumonitis” OR “organizing pneumonitis” OR “BOOP” OR “interstitial lung disease”) identified 11 patients of RA with OP as an initial manifestation, published in English literature.[1-8] Clinical characteristics of these patients including the present case are summarised in **Table 1**. The median age of these patients was 61.5 years (range: 28-86), with present case being the youngest, and 8/12 patients were female.

At the onset of respiratory symptoms, RF and ACPA were positive in 7/8 and 7/7 patients respectively. Whereas at the onset of articular symptoms, RF was positive in all the patients, and 10/11 patients had ACPA. In the present case it is uncertain whether the antibodies were present at the onset of ILD or developed thereafter.

The present case along with previously published cases emphasises on the importance of testing for RF and ACPA, and a cautious follow-up for development of arthritis in patients with cryptogenic OP.

CONSENT

Informed consent could not obtained, as we lost contact with the patient. However, patient’s identity has not been revealed.

CONFLICT OF INTEREST

The authors declare no conflict of interest.

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