A M PRIEUR
Groupe de Recherche d'Immunologie et de
Rhumatologie Pédiatrique
Hôpital des Enfants-Malades
Necker, Paris, France

Correspondence to: Dr Joost P H Drenth,
Department of Medicine, Division of General
Internal Medicine, University Hospital St.
Radboud, PO Box 9101, 6500 HB Nijmegen, The
Netherlands.

- Loeliger A E, Kruize A A, Bijlsma J W J, Derksen R H W M. Arthritis in hyperimmunoglobulinaemia D. *Ann Rheum Dis* 1993; **52**: 81.
- Prieur A M, Griscelli Cl. Aspect nosologique des formes systémiques d'arthrite juvénile à début très précoce. A propos de dix-sept observations. *Ann Pédiatr* 1983; **30**: 565-9.
- Hiemstra I, Vossen J M, Van Der Meer J W M, Weemaes C M R, Out T A, Zegers B J M. Clinical and immunological studies in patients with increased serum IgD level. *J Clin Immunol* 1989; **9**: 393-400.
- Haraldson A, Weemaes C M R, De Boer A W, Bakkeren J A J M, Stoeltinga G B A. Immunological studies in the hyperimmunoglobulin D syndrome. *J Clin Immunol* 1992; **12**: 424-8.
- Prieur A M, Ansell B M, Bardfeld R, et al. Is onset type evaluated during the first three months of disease satisfactory for defining the sub-groups of juvenile chronic arthritis? A EULAR cooperative study (1983-1986). *Clin Exp Rheumatol* 1990; **8**: 321-5.
- Van der Meer J W M, Vossen J M, Radl J, et al. Hyperimmunoglobulinaemia D and periodic fever: a new syndrome. *Lancet* 1984; **i**: 1087-90.

Buerger's disease and antiphospholipid syndrome

Sir: Casellas *et al* reported a patient in whom arterial occlusions were found in association with anticardiolipin antibodies.¹ The authors discussed the diagnosis of Buerger's disease (thromboangiitis obliterans) and the relation with the antiphospholipid syndrome.

Buerger's disease is an uncommon vasculitis of unknown cause, in which tobacco is implicated. Diagnosis is difficult because clinical, anatomopathological, and arteriographic features are not specific. Cell mediated sensitivity to collagen was reported to be helpful in diagnosis,² but was not specific.³ Several diagnostic criteria have been proposed.⁴ Adar and Mozes suggested that positive and negative criteria might be used for diagnosis.^{2,5} Thus these authors considered that other causes of arterial occlusions, such as coagulation disorders, systemic diseases, or embolism, rule out the diagnosis of Buerger's disease.²

The patient described by Casellas *et al* presented with repetitive intrauterine fetal deaths, mild thrombopenia, and a significant level of anticardiolipin antibodies without evidence of systemic lupus erythematosus. A diagnosis of primary antiphospholipid syndrome could be made. The major arterial lesions of the patient were in agreement with those now well recognised in the antiphospholipid syndrome.⁶⁻¹⁰ The range of histopathological changes seen in antiphospholipid arterial vasculopathy is quite different from changes in Buerger's disease.¹⁰ The acute lesions of Buerger's disease are associated with an intense mixed cell inflammatory infiltrate. This is not present in patients with antiphospholipid vasculopathy, in whom thrombosis appears at various stages of thrombus organisation, and not vasculitis.⁹

We conclude that the patient described by Casellas *et al*, even if she fulfilled the criteria

of probable Buerger's disease according to McPherson, should not be considered to have this disease. The negative criteria of Adar and Mozes should be taken into account, thus preventing overdiagnosis of Buerger's disease and avoiding the risk of misdiagnosis of a more common and curable disease and delay of urgent specific treatment.

X PUÉCHAL
C JOB-DESLANDRE
C J MENKES
Service de Rhumatologie A
Hôpital Cochin
75014 Paris, France

J N FIESSINGER
Service de Pathologie Vasculaire
Hôpital Broussais
75014 Paris, France

- Casellas M, Pérez A, Cabero L, Segura A, Puig de Morales E, Selva O'Callaghan R. Buerger's disease and antiphospholipid antibodies in pregnancy. *Ann Rheum Dis* 1993; **52**: 247-8.
- Adar R, Papa M Z, Halpern Z, et al. Cellular sensitivity to collagen in thromboangiitis obliterans. *N Engl J Med* 1983; **308**: 1113-6.
- Smolen JS, Weidinger P, Menzel E J. Sensitivity to collagen in thromboangiitis obliterans. *N Engl J Med* 1983; **309**: 857-8.
- McPherson J R, Juergens J L, Gifford R W. Thromboangiitis obliterans and atherosclerosis obliterans. Clinical and prognostic differences. *Ann Intern Med* 1963; **59**: 288-96.
- Mozes M, Cahansky G, Doitsch V, Adar R. The association of atherosclerosis and Buerger's disease: a clinical and radiological study. *J Cardiovasc Surg* 1970; **11**: 52-9.
- Jindal B K, Martin M F R, Gayner A. Gangrene developing after minor surgery in a patient with undiagnosed systemic lupus erythematosus and lupus anticoagulant. *Ann Rheum Dis* 1983; **42**: 347-9.
- Asherson R A, Harris E N, Gharavi A E, et al. Arterial occlusions associated with antibodies to cardiolipin [Abstract]. *Arthritis Rheum* 1985; **28**: S89.
- Asherson R A, Derksen R H W M, Harris E N, et al. Large vessel occlusion and gangrene in systemic lupus erythematosus and "lupus-like" disease. A report of six cases. *J Rheumatol* 1986; **13**: 740-7.
- Lie J T. Vasculopathy in the antiphospholipid syndrome: thrombosis or vasculitis, or both? *J Rheumatol* 1989; **16**: 713-5.
- Alarcón-Segovia D, Cardiel M H, Reyes E. Antiphospholipid arterial vasculopathy. *J Rheumatol* 1989; **16**: 762-7.

AUTHORS' REPLY: Puéchal *et al* suggest that the patient we described recently in the *Annals*¹ had primary antiphospholipid syndrome (PAS) rather than Buerger's disease.

The authors adduce histological differences between these two conditions: in Buerger's disease the primary lesion is vasculitis, whereas in PAS it is thrombosis. Although correct, this fact does not exclude, in our opinion, a possible association: it is theoretically possible that vasculitis, by causing endothelial cell damage, might have triggered the reaction of antiphospholipid antibodies with negatively charged phospholipids on these cells, as described by Alarcón-Segovia *et al*.²

Puéchal also suggests, based on the negative criteria of Adar and Mozes,³ that diagnosis of another associated disease should exclude Buerger's disease. The paper published by Adar was designed to examine the 'possible relationship between Buerger's disease and atherosclerosis by clinical and radiological analysis of young patients with ischaemic disease of the lower extremities'. Patients with evidence of embolism, trauma, or collagen disease were excluded from the study group, but, in our opinion, these diseases were not defined as negative criteria for the diagnosis of Buerger's disease. A clinical diagnosis of Buerger's disease was

made by Adar when, in addition to ischaemic manifestations in the legs, two or more of the following systemic manifestations were present: migrating phlebitis; vasospastic elements—such as Raynaud-like phenomena—in hands or legs, or both; and ischaemic manifestations in the arms.

Although there were grounds for diagnosing Buerger's disease in our patient in accordance with McPherson, we did in fact point out in our paper that the clinical picture might be attributed entirely to PAS. However, given the possible association, we tested 13 patients diagnosed in our hospital as having Buerger's disease over the past three years for the presence of antiphospholipid antibodies; these were absent in all cases. Although this suggests that these two conditions are not related, further studies are needed to confirm this. Otherwise there will be a risk of failing to establish a possible, though unlikely, association between two conditions of as yet unknown cause.

M CASELLAS
J GONZÁLEZ BOSQUET
L CABERO
Obstetrics and Gynaecology Department
Maternity and Children's Hospital
C S Vall d'Hebron s/n
Barcelona, Spain

A SEGURA
Internal Medicine Department
General Hospital
C S Vall d'Hebron s/n
Barcelona, Spain

- Casellas M, Pérez A, Cabero L, Segura A, Puig de Morales E, Selva O'Callaghan R. Buerger's disease and antiphospholipid antibodies in pregnancy. *Ann Rheum Dis* 1993; **52**: 247-8.
- Alarcón-Segovia D, Cardiel M H, Reyes E. Antiphospholipid arterial vasculopathy. *J Rheumatol* 1989; **16**: 762-7.
- Mozes M, Cahansky G, Doitsch V, Adar R. The association of atherosclerosis and Buerger's disease: a clinical and radiological study. *J Cardiovasc Surg* 1970; **11**: 52-9.

LETTERS TO THE EDITOR

Erythema induratum and pulmonary tuberculosis

Sir: Erythema induratum, first described by Bazin in 1861,¹ is an uncommon inflammatory skin disease pathologically characterised by nodular vasculitis.² Erythema induratum occurs mainly in women and features recurrent, painful, subcutaneous nodules generally found on the lower legs, which usually deteriorate in winter.² A direct correlation with *Mycobacterium tuberculosis* infection has been found. Rarely, however, an active tuberculous focus has been reported.³ On the other hand, it is well known that mycobacterial infections can be associated with raised titres of rheumatoid factor (RF).⁴ Recently, we studied a woman with erythema induratum who had high levels of RF and active pulmonary tuberculosis. After specific chemotherapy the skin lesions disappeared and RF fell to normal.

A 35 year old woman was referred to the rheumatology unit of this hospital because of