4 **Guillevin L**, Cordier JF, Lhote F, Cohen P, Jarrousse B, Royer I, *et al*. Prospective, multicenter, randomized trial comparing steroids and pulse cyclophosphamide versus steroids and oral cyclophosphamide in the treatment of generalized Wegener's granulomatosis. Arthritis Rheum 1997;40:2187–98.
5 **Le Thi Huong D**, Papo T, Piette JC, Wechsler B, Bletry O, Lamas G, *et al*. Monthly intravenous pulse cyclophosphamide therapy in Wegener's granulomatosis. Clin Exp Rheumatol 1996;14:9–16.
6 **Ahmed AR**, Hombal SM. Cyclophosphamide (Cytoxan). A review on relevant pharmacology and clinical uses. J Am Acad Dermatol 1984;11:1115–26.

Paediatric Behçet's disease in France

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Our objective was to assess the increase in the number of children with Behçet's disease in France. To our knowledge, this survey is the most extensive reported from a single country.

Children with Behçet's disease from any part of France were referred to one of three medical centres: Marseille, Montpellier, and Paris. Information was obtained from the medical charts and from the patient's interview. A specific questionnaire was designed to determine the following demographic features: sex, age, city of residence, ethnicity, and familial history with complete pedigree; and the clinical variables: oral aphthous ulcers, genital ulceration, skin lesion, skin hypersensitivity plus other organ involvement—nervous system, gastrointestinal tract, eye, vessels, lungs, heart, joints, genitourinary tract, and fever. The date of onset of the disease was recorded together with the date of appearance of each symptom, and the date at which the patient met the international criteria for Behçet's disease.[1] A specific database was set up.

Fifty five children with Behçet's disease met the international criteria before the age of 16 years: 33 white subjects (27 French), nine North Africans, five Turks, three West Indians, three mixed white/North African subjects, one Asian, and one Ashkenazi Jew. The male to female ratio was 0.89. The mean age of onset was 7.5 years (median 8 years, SD 4.3). The mean age at which patients met the criteria for Behçet's disease was 11.6 years (median 12, SD 3.7; fig 1). The mean time between the appearance of the first and last criterion was 3.5 years (median 3, SD 3.7).

Initial symptoms were oral ulcers in 41 (74%) (at a mean age of 6.8 years), genital ulcers in 13 (24%) (at a mean age of 6.8 years), bipolar aphthosis in nine (16%), skin lesions in eight (14%), and uveitis in two (4%). At least two criteria were present in nine (16%) patients.

Recurrent oral ulcers were present at a mean age of 7.44 years. Genital ulceration occurred in 43 (79%) patients, at a mean age of 10.8 years. Cutaneous signs included erythema nodosum (26%), necrotic folliculitis (38%), and aphthosis (14%). Ocular signs were uveitis (36%), retinal vasculitis (24%), conjunctivitis (17%), papilloedema (7%), and keratitis (3%). Arthralgia was the main articular sign, arthritis was present in 17% of patients. Headaches were common (35%) and associated with aseptic meningitis (10%), benign intracranial hypertension (10%), and hemiparesis in two patients. Abdominal pain was reported in 40% of cases, with digestive ulceration in 14%. Ulcerative colitis was diagnosed in one patient. Venous thrombosis occurred in 21% of patients.

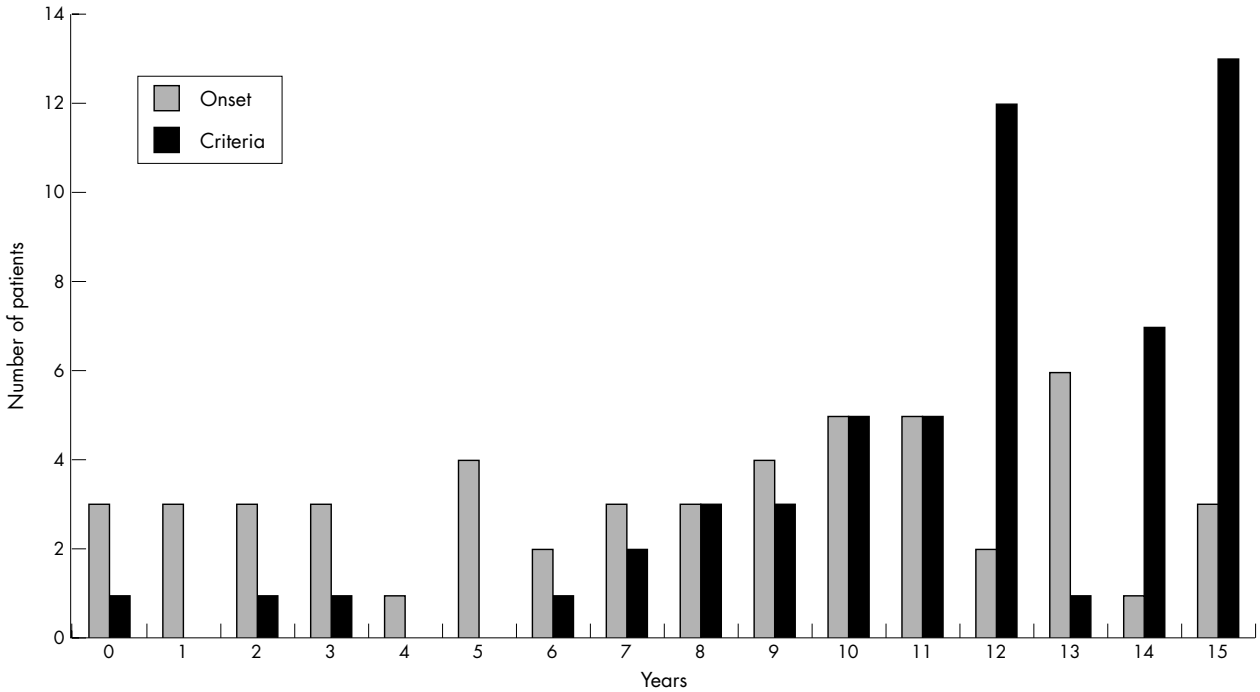

Figure 1 Age at which the first symptom appeared and age at which the children satisfied the criteria for Behçet's disease.

One 13 year old boy died of multiple deep vein thrombosis. Familial aggregation was present in four families which included eight patients (9%).

The epidemiology of paediatric Behçet's disease is difficult to evaluate because there is no formal agreement about the age of onset or the age of completed disease.[2 3] Previous epidemiological studies have shown that the proportion of patients in whom the onset of symptoms occurs under the age of 16 years varies from 3% to 24%.[4–7]

Selection of patients according to international criteria gave high percentages of patients with mucocutaneous and ocular symptoms (reaching 60%, of which 36% were uveitis). The spread of clinical signs in our patients was similar to that obtained by other studies for patients of the same mean age and recruited similarly. The familial occurrence of BD, 9%, has been reported to be high in children and also in patients from endemic areas such as Turkey, Korea, and Tunisia.[8–10] Therefore genetic linkage studies are needed to examine the genetic component of Behçet's disease further.

The number of recognised cases of Behçet's disease in children in France is increasing, probably reflecting an increase in doctors' awareness of this disease. Worldwide collaborations are now needed to delineate this subgroup of patients and to establish accurate sets of criteria.

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REFERENCES

1 **International study group for Behçet's disease**. Criteria for the diagnosis of Behçet's disease. Lancet 1990;335:1078–80.
2 **Bang D**, Han Yoon K, Chung HG, Cho EU, Lee ES, Lee S. Epidemiological and clinical features of Behçet's disease in Korea. Yonsei Med J 1997;38:428–36.
3 **Zouboulis CC**, Kötter I, Djawari D, Kirch W, Khol PK, Ochsendorf FR, *et al*. Epidemiological features of Adamantiades Behçets disease in Germany and in Europe. Yonsei Med J. 1997;38:411–22.
4 **Kim DK**, Chang SN, Bang D, Lee ES, Lee S. Clinical analysis of 40 cases of childhood onset Behçet's disease. Pediatr Dermatol 1994;11:95–101.
5 **Sarica R**, Azizerli G, Kose A, Disci R, Ovul C, Kural Z. Juvenile Behçet's disease among 1784 Turkish Behçet's patients. Int J Dermatol 1996;35:109–11.
6 **Benamour S**, TakTak T, Moudatir A, Hamdani M, Mikou N, Hadj Khalifa H, *et al*. Juvenile Behçet's disease and juvenile onset Behçet;s disease in Morocco. In: Proceedings of the 7th international congress on Behçet's disease. Reggio Emilia1998:176.
7 **Treudler RR**, Orfanos CE, Zouboulis CC. Twenty eight cases of juvenile onset Adamantiades Behçet's disease in Germany. Dermatology 1999;199:15–19.
8 **Koné-Paut I**, Geisler I, Wechsler B, Ozen S, Ozdogan H, Rozenbaum M, *et al* Characteristics of familial aggregation in Behçet's disease: high frequency of BD in siblings and parents of pediatric probands. J Pediatr 1999;135:89–93.
9 **Gul A**, Inanc M, Ocal L, Aral O, Konice M. Familial aggregation of Behçet's disease in Turkey. Ann Rheum Dis 2000;59:622–5.
10 **Fresko I**, Soy M, Hamuryudan V, Yurdakul S, Yavuz S, Tuner Z, *et al*. Genetic anticipation in Behçet's syndrome. Ann Rheum Dis 1998;57:45–4.

Intra-articular and soft tissue injections: assessment of the service provided by nurses

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Local steroid injections have traditionally been given by doctors in rheumatology practice, with varying accuracy and success.[1–3] The first joint injection course for nurses approved by the English National Board (ENB) was established at Cannock Chase Hospital in 1995, jointly led by a rheumatology consultant and nursing sister, and has run annually since then (ENB-N78).[4] Over 50 nurses have completed the course, including many from this unit. They now give an increasing proportion of these injections at this hospital (following medical prescription), releasing doctors for other activities. Our audit assessed this service increasingly provided by nurses, measuring the frequency and type of nurse injection and patient satisfaction. Injections given by nurses and doctors at this unit were compared, as we required a standard of service from the nurses at least equal to that of the doctors.

The audit included all patients who underwent an intra-articular or soft tissue cortiocosteroid injection at this hospital over one calendar month. Injectors recorded their professional background and the site of injection(s). After the

Table 1 Number of local corticosteroid injection at different anatomical sites performed by nurses and doctors

Site	Nurse	Doctor	Total
Subacromial space	32	18	50
Glenohumeral joint	5	4	9
Elbow joint	3	2	5
Wrist joint	14	5	19
Carpometacarpal joint	0	2	2
Knee joint	35	12	47
Ankle joint	14	2	16
Subtalar joint	0	4	4
Trochanteric bursa	1	1	2
Other	10	6	16
Total	114	56	170