ness in properly conducted double-blind comparisons with placebo. Such reports vastly outnumber reports showing no such differences.

May I conclude, Sir, by asserting that the hazards of treatment with psychotropic drugs are far outweighed by the hazards of leaving untreated those illnesses for which they are indicated.

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¹ Wheatley, D, *Psychopharmacology in Family Practice*, p 170. London, Heinemann Medical, 1973.

Takayasu's disease and giant cell arteritis—a single disease?

SIR,—We would dispute the statement made in a recent leading article (12 March, p 667) that Takayasu's disease can be distinguished clinically and pathologically from giant cell arteritis. We describe a patient who presents features common to both which highlight our contention that they are not separate entities but form components of a continuous spectrum of inflammatory arterial disease.

In 1971 a 55-year-old woman developed aching and weakness of the shoulders, hips, and thighs which was worst on rising in the morning and was relieved by activity. Her general practitioner diagnosed rheumatoid arthritis and treated her with steroids. She developed severe back pain due to osteoporotic vertebral collapse, and the steroids were stopped. One year later she again complained of aching and weakness of the limb girdle muscles. The ESR was 30 mm in the first hour. A diagnosis of polymyalgia rheumatica was made, and steroids were restarted. Once again there was dramatic clinical improvement, but following a further episode of back pain they were discontinued. The ESR rose to between 70 and 120 mm in the first hour and her symptoms recurred but were partially relieved by indomethacin. She developed a microcytic, hypochromic anaemia which did not respond to iron supplements and for which she required transfusion.

She was admitted to this hospital in December 1976 with a six-month history of increasing malaise, anorexia, and tiredness. For four months she had noticed constant tingling in all the fingers of both hands and, increasingly, pain in both shoulders and arms, worse on exertion and relieved by rest. By the time of admission she was unable to do even light housework. On examination she was afebrile and anaemic, her hands were cold and white, and no axillary, brachial, or radial pulses could be felt in either arm. There was a loud right subclavian bruit. All other pulses were normal. Blood pressure (popliteal artery) was 200/90 mm Hg. Investigations showed haemoglobin 10.7 g/dl, normochromic, normocytic red cells. The ESR was 83 mm in the first hour. The bone marrow was of normal cellularity, iron stores were plentiful, and erythropoiesis was normoblastic. Serum iron 4.5 μ mol/l, iron binding capacity 31.5 μ mol/l. The alkaline phosphatase was normal, the Wassermann reaction and rheumatoid and antinuclear factors were negative. There was a diffuse elevation of α_2 and γ globulins, IgG raised, 17.75 g/l, IgA and IgM normal. Thyroid function was normal. Spinal x-rays showed generalised osteoporosis and collapse of D4, 7, and 8. On arch aortography stenoses of both subclavian arteries involving the origin of the vertebral arteries were seen. The aorta and all its other large branches were examined and found to be normal. The patient was treated with prednisolone, 100 mg on alternate days. Her tiredness and malaise improved and five weeks later the ESR had fallen to 29 mm in the first hour and the haemoglobin had risen to 12.9 g/dl, but the symptoms of upper limb claudication persisted unchanged.

The clinical and pathological overlap

between polymyalgia rheumatica and temporal arteritis is such that they are now usually accepted as manifestations of one condition, polymyalgia arteritica or giant cell arteritis.¹ Similar overlap occurs between giant cell arteritis and Takayasu's disease. Our patient's illness illustrates the systemic disturbances which may precede and accompany the specific features of arterial insufficiency, the anaemia, the high ESR, and the response to steroids common to both. That giant cell arteritis may cause large vessel occlusion and an aortic arch syndrome identical to that of Takayasu's disease is well documented.² A female preponderance is common to both² and both may burn themselves out. Far from being pathologically distinct their microscopic morphology is said to be indistinguishable.¹ A panarteritis with giant cell formation occurs in both and may affect both large and medium sized vessels.³ The sole remaining distinction, that of age, has not prevented Takayasu's disease being diagnosed in the elderly.³

We feel that an unnecessary distinction is being made and that a single disease entity exists which presents as a variety of symptom complexes whose incidence may vary with age. Hall has suggested the name "idiopathic arteritis" for what he calls the "Unholy Trinity" of cranial arteritis, polymyalgia rheumatica, and Takayasu's disease.⁴

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¹ Healy, L A, and Wilske, K R, *Medical Clinics of North America*, 1977, **61**, 261.

² Swinson, D R, et al, *Postgraduate Medical Journal*, 1976, **52**, 525.

³ Ask-Upmark, E, *Acta Medica Scandinavica*, 1954, **149**, 161.

⁴ Hall, G H, *American Heart Journal*, 1973, **85**, 835.

Diagnosing familial hypercholesterolaemia in childhood

SIR,—Dr J V Leonard and his colleagues (18 June, p 1566) provide very interesting data on serum cholesterol and low density lipoprotein (LDL) cholesterol levels in children for the diagnosis of familial hypercholesterolaemia (FH). They conclude that when the total serum cholesterol concentration is in the range of 6.5-7.0 mmol/l (250-270 mg/100 ml) the diagnosis of FH cannot be made or excluded with complete confidence. They make the point that alternative methods of diagnosing FH are needed and suggest that the abnormality of the LDL receptor sites¹ on cells might provide the basis for a test with greater discriminating capacity than the determination of total serum cholesterol or LDL cholesterol.

Regulation of HMG CoA reductase activity in leucocytes in members of family of patient heterozygous for FH

Sex	Age (years)	Serum cholesterol (mmol/l)	Serum triglycerides (mmol/l)	HMG CoA reductase activity (nmol mevalonate/g protein in 15 min)	
				Delipidated fetal calf serum	Complete fetal calf serum
F	16	4.29	0.81	30.0	Not detectable
F	14	5.46	0.81	36.0	2.7
F	10	3.51	0.73	31.1	Not detectable
F	8	3.38	0.66	42.5	Not detectable
M	10	5.20	1.45	47.0	Not detectable
F	8	4.68	1.28	41.0	Not detectable
M	10	5.46	1.03	53.5	47.2*
M	3	5.72	1.49	57.1	32.1*
F	8	5.38	1.49	59.2	38.1*
F	6	7.80	1.01	55.4	40.0*

*Failure of normal regulation.

Conversion: SI to traditional units—Cholesterol: 1 nmol/l $\approx$ 38.7 mg/100 ml. Triglycerides: 1 nmol/l $\approx$ 88.6 mg/100 ml.

We would like to draw the authors' attention to our report published in the *BMJ* in 1975.² We investigated 16 members of the family of a patient heterozygous for FH by measuring the regulation of 3-hydroxy-3-methylglutaryl coenzyme-A reductase (HMG CoA reductase) activity (which probably depends on an intact LDL receptor) in freshly prepared leucocytes preincubated in delipidated serum and then transferred to medium containing complete serum. In normal subjects there was almost complete suppression of enzyme activity on transfer of the cells to medium containing complete serum; patients heterozygous for FH showed only partial suppression. Ten members of the family were aged 16 years or under (see table). We found that four children of the family showed failure of normal regulation of HMG CoA reductase activity and in only one of these children was the serum cholesterol level unequivocally raised. We assume that failure of regulation of HMG CoA reductase is close to the genetic defect and is a diagnostic marker for the disease in this kindred.

We would, however, offer a word of caution in that we have subsequently found one member of a kindred heterozygous for FH with massive tendon xanthomata and premature myocardial infarction who shows no abnormality in the regulation of HMG CoA reductase,³ suggesting heterogeneity in this condition.

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¹ Brown, M S, and Goldstein, J L, *New England Journal of Medicine*, 1976, **294**, 1386.

² Betteridge, D J, Higgins, M J P, and Galton, D J, *British Medical Journal*, 1975, **4**, 500.

³ Higgins, M J P, and Galton, D J, *European Journal of Clinical Investigation*. In press.

Phenothiazine resistance

SIR,—It has been my experience over some years that there is a small number of patients suffering from acute schizophrenia whose condition appears to be resistant to treatment with phenothiazines and thioxanthenes. Much larger than normal doses of the drugs can be given without any effect on the psychosis. In such cases my practice has been to give a short course of electric convulsion therapy (ECT), usually 3-4 treatments, which seems to break down the resistance, thus making the patient's condition sensitive to the phenothiazines. They