

enzyme linked immunosorbent assay (ELISA; >30 units) for IgG antibodies to *Borrelia burgdorferi* (confirmed on immunoblotting); and symptomatic improvement after antibiotic treatment. No patients had shown features of classical Lyme carditis, and only one had any history of cardiovascular disease (treated hypertension).

The main abnormalities (left ventricular hypertrophy with mild systolic impairment) were observed in association with a prolonged delay

Results of cardiac investigations in eight patients with Lyme disease

	Antibiotic treatment	
	Within 1 year (n=5)	Delayed > 3 years (n=3)
Cardiac abnormalities:		
Nodal rhythm	0	1
First degree heart block	0	2
Left ventricular hypertrophy	0	3
Aortic valve regurgitation	0	1
Systolic function (mean (range) left ventricular shortening (%))	37 (33-44)	25 (20-29)
Diastolic function (mean (range) ratio of maximal mitral early to late diastolic (atrial) flow velocities)	1.3 (1.0-1.8)	1.0 (1.0-1.1)

before antibiotic treatment was started (table). These findings cannot be conclusively attributed to Lyme disease since cardiac tissue was not examined histologically. Late onset heart block and left ventricular hypertrophy have, however, been described in case reports for which post-mortem data were available.^{3,4} We speculate that our observations represent an early stage of a Lyme cardiomyopathy,² and we hope that they will stimulate further investigation.

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Medical consequences of sanctions against Yugoslavia

EDITOR,—As a physician, I consider it urgent that the international community be informed of the medical consequences resulting from the blockade of the Federal Republic of Yugoslavia (Serbia and Montenegro). It has been repeatedly claimed that the embargo spared the delivery of drugs and medical equipment. I can witness that this is not true. During a recent journey to Yugoslavia I visited the Mother and Child Health Institute in Belgrade. This is a 500 bed hospital to which children of all ethnic origins are referred from the whole country. Highly qualified doctors, nurses, and technicians are working there but are now

often unable to provide adequate care to their patients because of various shortages.

Tuberculin has been lacking for several months. Essential drugs—antibiotics, antituberculous agents, antiasthmatics, anticancer drugs, nutritional preparations—are lacking as well. A national screening programme for congenital phenylketonuria and hypothyroidism is on the brink of collapse because of lack of chemical reagents.

These shortages result from economic asphyxia of the country imposed by the blockade, as well as from numerous obstacles for importing medicine that exist despite certified authorisation from the UN committee on sanctions. This alarming situation has been publicised in an open letter to the world scientific community by the Yugoslav academic authorities but is ignored by the international community. The lack of information is further aggravated by the expulsion of Yugoslavia from the World Health Organisation. Political leaders who voted for the blockade of Yugoslavia must know that their decision seriously threatens the health and the lives of many children. This measure only adds to the tragedy plaguing the region.

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Spinal cord stimulation or ischaemic preconditioning?

EDITOR,—We would like to offer an alternative explanation for the anti-ischaemic effects observed by C Mannheimer and colleagues during a second period of rapid pacing.¹ In their study patients underwent rapid pacing to induce angina, then after a rest period spinal cord stimulation was started and rapid pacing began again. This protocol is identical with those used to induce ischaemic preconditioning—that is, the profound tolerance to ischaemia induced in the heart by three to five minutes of ischaemia.² Thus we propose that the ischaemia induced by the first period of rapid pacing acts as a preconditioning trigger and that it is this rather than spinal cord stimulation that is responsible for the reported anti-ischaemic effect.

In support of this alternative hypothesis, the changes in coronary sinus blood flow, myocardial lactate production, ST segment depression, and myocardial oxygen consumption described by Mannheimer and colleagues between the first and second periods of rapid pacing are identical with the changes seen in these variables when the first and subsequent balloon inflations during percutaneous transluminal coronary angioplasty are compared.^{3,4} The studies of coronary angioplasty, however, did not use spinal cord stimulation. In addition, animal studies suggest that, although rapid pacing fails to precondition hearts with a normal coronary vasculature, similar techniques would be successful in the presence of fixed coronary stenoses such as occur in ischaemic heart disease.⁵ Furthermore, in Mannheimer and colleagues' study the first period of rapid pacing was separated from the second by 50 minutes; this is within the time for which preconditioning remains effective in animal studies.²

The evidence cited by Mannheimer and colleagues in support of the use of rapid pacing as an investigative tool in ischaemic heart disease predates present knowledge of ischaemic preconditioning. By chance both the protocols cited were probably insufficient for preconditioning. In the study by Forrester *et al* patients were excluded if angina occurred during rapid pacing, and in the study by Sowton *et al* only brief periods of rapid pacing (<1 minute) were used. Unfortunately,

Mannheimer and colleagues did not adhere to these criteria, pacing for longer periods and causing angina in all cases.

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Early psychological intervention after traumatic events

EDITOR,—G G Lloyd states that serious problems such as post-traumatic stress disorder may be averted by a proactive approach.¹ Early psychological intervention after traumatic events has increasingly been advocated in recent years by various authors, including the British Psychological Society.² Unfortunately, methodologically sound data supporting this advocacy are few and most statements are based on anecdotal reports and intuition.

It is essential that Fairbank and Nicholson's call for studies to use a case-control design with measures obtained before and after treatment is heeded.³ Until data from such studies are available Dunning's assertion that the efficacy of early psychological interventions is "uncertain and untested" will remain accurate.⁴

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Preventing melanoma

EDITOR,—Torrey's campaign on melanoma seems to have focused mainly on early detection.¹ There is no unequivocal evidence that early detection reduces mortality from melanoma, and we are concerned that this opportunistic promotion of early detection is unlikely to be cost effective and will fail to reach all sections of the population at risk.

Two research studies into the value of early detection of melanoma are in progress in Britain, one by MacKie in western Scotland² and the other, supported by the Cancer Research Campaign, in seven districts in the rest of Britain.³ Health education about the signs of melanoma was directed at a target population of over five million, and