LETTERS TO THE EDITOR

- *The British Heart Journal welcomes letters commenting on papers that it has published within the past six months.*
- *All letters must be typed with double spacing and signed by all authors.*
- *No letter should be more than 600 words.*
- *In general, no letter should contain more than six references (also typed with double spacing).*

Tissue plasminogen activator (alteplase) treatment for femoral artery thrombosis after cardiac catheterisation in infants and children

SIR—Zenz *et al* described the efficacy of fibrinolytic therapy with tissue plasminogen activator in 17 consecutive infants and children with femoral artery thrombosis after cardiac catheterisation.[1] They gave 0·5 mg/kg/h continuously through a peripheral vein for the first hour followed by 0·25 mg/kg/h till clot lysis occurred or treatment had to be stopped because of bleeding complications. With this dosage clot lysis was complete in 16 patients within 4–11 hours after the start of treatment. One patient had only partial lysis. Bleeding complications were seen in nine patients. These were restricted to the arterial puncture site, except for one patient who showed mild epistaxis. Three patients had to be treated with packed erythrocytes.

We used systemic recombinant tissue plasminogen activator (rt-PA) to treat femoral artery thrombosis in six children (aged 1 year 2 months to 5 years 5 months) after cardiac catheterisation. An initial dose of 0·5 mg/kg was given as a slow bolus injection over 30 min followed by a continuous infusion of 0·5 mg/kg/day. This thrombolytic therapy was started after 2 days of unsuccessful heparin treatment in four infants and after 3 and 6 days respectively in the other two patients.

The five children in whom rt-PA treatment was started in the first 3 days after the thrombotic event improved within the first 6 hours and clot dissolution was complete within 7—72 hours. The patient in whom rt-PA treatment was started 6 days after cardiac catheterisation showed only slight clinical improvement after 24 hours of thrombolytic therapy. The dose was increased to 1 mg/kg/day for another 6 days, resulting in complete thrombolysis. In this patient fibrinogen decreased from 3·62 g/l to 2·54 g/l. The other children had no significant change in fibrinogen concentration during and after thrombolytic therapy that indicated systemic fibrinolytic activation. None of our patients had bleeding complications.

We think that the treatment time reported by Zenz *et al* was shorter because the dose was higher and treatment was started after 24 hours of unsuccessful treatment with heparin. They commented that further investigations with lower doses of tissue plasminogen activator are needed because bleeding complications were common in their study.

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1 Zenz W, Muntean W, Beitzke A, Zobel G, Riccabona M, Gamillscheg A. Tissue plasminogen activator (alteplase) treatment for femoral artery thrombosis after cardiac catheterisation in infants and children. *Br Heart J* 1993;70:382–5.

This letter was shown to the authors, who reply as follows:

SIR—Ries and colleagues describe the successful treatment of femoral artery thrombosis in six children after cardiac catheterisation with recombinant tissue plasminogen activator (rt-PA) with 0·5 mg/kg as a bolus injection over 30 minutes followed by a continuous infusion of 0·5 mg/kg/day (that is, 0·02 mg/kg/h). Lysis took up to 7 days. They suggest that doses of rt-PA lower than that used in our study (0·5 mg/kg for one hour followed by 0·25 mg/kg/h) may be as effective but less likely to be complicated by serious bleeding.[1]

The dosage studies that we mentioned in our paper are underway. So far the preliminary results of another prospective trial of rt-PA (0·25 mg/kg/h for one hour followed by 0·1 mg/kg/h) in children with femoral artery thrombosis after cardiac catheterisation look promising. In 10 out of 11 children clot lysis was complete after 6–48 hours. Bleeding complications were seen in only one patient.

We believe, if these results are confirmed when the study is complete, that in children a short duration of lysis with a relatively high dose of rt-PA that is accompanied by an acceptably small incidence of bleeding may be better than a very long lysis time. This would reduce the complications of a diagnostic procedure.

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1 Zenz W, Muntean W, Beitzke A, Zobel G, Riccabona M, Gamillscheg A. Tissue plasminogen activator (alteplase) treatment for femoral artery thrombosis after cardiac catheterisation in infants and children. *Br Heart J* 1993;70:382–5.

BRITISH CARDIAC SOCIETY NEWSLETTER

The number of patients with heart failure is increasing. Until recently most were treated by general practitioners and general physicians. Increasing awareness of the inadequacy of diagnosis by clinical means alone and the increasing effectiveness and complexity of treatment are placing additional demands on cardiologists and stimulating the development of shared care between the cardiologist and general practitioner.

At the Berlin Congress, the European Society of Cardiology looks set to recognise formally the working group on heart failure. and guidelines for diagnosis and treatment are well under way. The British Cardiac Society too has recognised the importance of heart failure and has set up a working group with the Royal College of Physicians of London to draw up guidelines for the management of heart failure in adults. This working group will liaise closely with the European Society working group on heart failure.

On a different topic: the Cardiac Society has recently been informed by Dr Meg Weir of the Department of Health, Wellington House, 133–155 Waterloo Road, London SE1 8UG that the Chief Medical Officer has launched an Educational Training Pack for hospital doctors called "HIV and AIDS—The Issues". This is designed for non-specialist doctors and covers ethical, social, and legal issues surrounding the care and management of patients with HIV and AIDS. The pack consists of 10 modules complete with acetates as an aid to teaching.

British Pacing and Electrophysiology Group

Anthony Nathan writes: "The British Pacing and Electrophysiology Group continues to be active in several areas. In July an excellent annual general meeting was held, with updates on published reports on tachycardias and bradycardias, a quiz, a mini symposium on atrial fibrillation, and a guest lecture from Professor Lukas Kappenberger on pacing for hypertrophic cardiomyopathy.

The national database for both pacemakers and defibrillators continues to be refined and a new computerised version of the database that uses *Windows* should be released shortly. We encourage all implanters of pacemaker defibrillators to register patients and their devices; registration is particularly useful for tracking any recalls, as has been shown recently in some well publicised cases. Many centres that are not registering devices but would like to do so should get in touch with me.

BPEG is playing a major part in the British Cardiac Society/Royal College of Physicians Guidelines for Patient Management. Workshops will be held on

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bradycardias and tachycardias and good working practice guidelines issued. Efforts in better education continue and to this end a full day programme will be held on 17 October 1994 to provide an update on all aspects of tachycardias and bradycardias and their treatment. Further information on this meeting, to be held in London, can be obtained from the BPEG office at 9 Fitzroy Square, London W1P 5AH (tel: 071 636 5994)."

British Society of Echocardiography

Mark Monaghan writes: "The British Society of Echocardiography has been going through a very busy period. We had a highly successful session during the Torquay meeting. Two debates were held on controversial topics in echocardiography, which proved to be highly entertaining and lively. Undoubtedly, this is a formula that we shall repeat.

Plans are well under way for our Autumn meeting, to be held at the Bedford Hotel in Brighton on Friday 25 and Saturday 26 November 1994. The first day will consist of presentations of abstracts (the closing date for receipt of abstracts is 2 September 1994). These abstracts will be published in *Echocardiography 1995*—a supplement to the *British Heart Journal*. On Saturday 26 November there will be a series of more practically orientated lectures, covering topics such as the diagnosis of pericardial disease and aortic dissection. Surgeons, cardiologists, and echocardiographers are all contributing to these topics and we are anticipating another very lively meeting.

We plan to hold the first of our proficiency level assessments during our Autumn meeting. These will include multiple choice questions and video tapes, etc., for those candidates wishing to apply for BSE proficiency level accreditation. In addition, candidates will have to complete a log book of completed cases. However, the log book does not have to be finished before the assessment is taken.

We have made some representations to the British Cardiac Society about the guidelines for specialist training in cardiology. We are pleased to see echocardiography given appropriate prominence in these recommendations. However, we would like to find some common ground on recommended numbers of cases and assessments. No doubt, this will be an ongoing discussion.

As previously mentioned, preparation of the next edition of our supplement to the *British Heart Journal* is already well advanced. Various articles, which will all be peer reviewed, are being prepared in addition to the abstracts from our Autumn meeting.

Our new membership administrator has a new computer system and database which will allow us to deal with our membership records more efficiently and also to store information such as training accreditation.

We are also planning a joint meeting with BCIS on interventional ultrasound. This will cover topics such as valvuloplasty, intravascular ultrasound, Doppler flow wire, etc. More details of this meeting will follow.

Finally, we have moved our annual general meeting to coincide with our Autumn meeting. This avoids our taking up valuable time during the British Cardiac Society annual meeting".

News from Europe

Philip Poole-Wilson writes: "By the time this is being read, the Congress in Berlin will be over. The organisation of this Congress has been a particular challenge to the European Society of Cardiology because it is not only the XVIth Congress of the European Society of Cardiology but also the XIIth World Congress of Cardiology. World Congresses occur every four years and are the meetings of the International Society and Federation of Cardiology (ISFC). The current President is David Kelly from Sydney, Australia. In Berlin he will be succeeded by Eliot Rapport from the USA.

We must now look ahead to the Congress in Amsterdam on 20–24 August, 1995. The planning committee meets on 27 October 1995. If you have suggestions for the programme please pass them directly to ECOR, to the chairman of a working group or, if you wish, directly to me. I will act as postman. Abstracts need to be received by ECOR by 14 February 1995. Application forms can be obtained from ECOR. The address of ECOR is: European Heart House, 2035 route des Colles, Les Templiers-BP 179, 06093 Sophia Antipolis Cedex, France (tel: 010 33 92 947600; fax: 010 33 92 947601)."

Forthcoming meetings

The annual meeting of the British Nuclear Cardiology Group will be held on 12 December, 1994 at St Thomas' Hospital in London. The programme, which is based on the theme of "How we will assess reversible ischaemia in the year 2000", can be obtained from Dudley Pennell at the Royal Brompton Hospital (tel: 071 351 8810). Professor Mario Verani from Houston, Texas will be giving the keynote lecture.

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NOTICE

The 1995 Annual Meeting of the **British Cardiac Society** will take place at the Conference Centre, Harrogate, West Yorkshire from 23 to 25 May.

CORRECTION

Short-term effects of right atrial, right ventricular apical, and atrioventricular sequential pacing on myocardial oxygen consumption and cardiac efficiency in patients with coronary artery disease.

Z S Kyriakides, A Antoniadis, E Iliodromitis, N Michelakakis, D T Kremastinos (*Br Heart J* 1994;71:536–40). In the formula for myocardial oxygen consumption (p 537) the first variable was given as CO (cardiac output). It should have been myocardial blood flow. The correct formula is $M\dot{V}O_2$ = MBF × (arterial O_2 saturation − coronary sinus O_2 saturation × Hb × 1·36 (ml O_2/min), where MBF is the myocardial blood flow in l/min and Hb is haemoglobin in g/100 ml.

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