with symptomatic paroxysmal atrial tachycardias that are not controlled by drugs. Such devices continually scan the sinus rate and monitor atrial extrasystoles. Right atrial overdrive pacing at 10-29 beats per minute faster than the sinus rate suppresses the frequency of extrasystoles. The pacing rate then slows to allow sinus activity to take over, provided no further extrasystoles are sensed. In some patients atrial fibrillation is initiated during sleep, when the sinus rate is vagally slowed. Resynchronisation (simultaneous pacing at two different atrial sites) in patients with intra-atrial conduction delay may be beneficial. Clinical trials will help answer the question of which form of pacing best prevents atrial fibrillation.

Cardioversion with implantable atrial defibrillators—These are useful in some patients with paroxysmal atrial fibrillation. It is known that rapid restoration of sinus rhythm reduces the risk of protracted or permanent atrial fibrillation. Cardioversion is synchronised to the R wave, and shocks are given between the coronary sinus and right ventricular leads. The problem is that shocks of >1 joule are uncomfortable, and the mean defibrillation threshold is 3 joules. Thus, sedation is required before each shock.

Future developments

With the development of anti-atrial fibrillation pacing, focal ablation to the pulmonary veins, and flutter ablation, implantable cardioverter defibrillators will be used less often in years to come. The future of device therapy for atrial fibrillation and atrial flutter probably lies in the perfection of radiofrequency ablation and atrial pacing, although there will still be a place for atrioventricular nodal ablation and permanent ventricular pacing in selected patients.

Competing interests: TH has been reimbursed by Guidant for attending a conference in 2001.

The figure of implantable cardioverter defibrillators from 1992 and 2002 is supplied by C M Finlay, CRT coordinator, Guidant Canada Corporation, Toronto.

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Further reading

- O'Keefe DB. Implantable electrical devices for the treatment of tachyarrhythmias. In: Camm AJ, Ward DE, eds. *Clinical aspects of cardiac arrhythmias*. London: Kluwer Academic Publishers, 1988:337-57
- Cooper RAS, Ideker RE. The electrophysiological basis for the prevention of tachyarrhythmias. In: Daubert JC, Prystowsky EN, Ripart A, eds. *Prevention of tachyarrhythmias with cardiac pacing*. Armonk, NY: Futura Publishing, 1997:3-24
- Josephson ME. Supraventricular tachycardias. In: Bussy K, ed. *Clinical cardiac electrophysiology*. Philadelphia: Lea and Febiger, 1993:181-274
- Connolly SJ, Hallstrom AP, Cappato R, Schron EB, Kuck KH, Zipes DP, et al. Meta-analysis of the implantable cardioverter defibrillator secondary prevention trials. *Eur Heart J* 2000;21: 2071-8
- Mirowski M, Mower MM, Staewen WS, Denniston RH, Mendeloff AI. The development of the transvenous automatic defibrillator. *Ann Intern Med* 1973;129:773-9

Timothy Houghton is specialist registrar in cardiology and Gerry C Kaye is consultant cardiologist at Hull and East Yorkshire Trust, Castle Hill Hospital, Hull.

The ABC of interventional cardiology is edited by Ever D Grech and will be published as a book in autumn 2003. Ever D Grech is consultant cardiologist at the Health Sciences Centre and St Boniface Hospital, Winnipeg, Manitoba, Canada, and assistant professor at the University of Manitoba, Winnipeg.

Correction

ABC of interventional cardiology: Percutaneous coronary intervention: cardiogenic shock

An authors' error occurred in this article by John Ducas and Ever D Grech (28 June, pp 1450-2). In the subsection "Supporting systemic blood pressure" (p 1451) the description of intra-aortic balloon pump counterpulsation should read: "Inflation occurs in early diastole [not end diastole], greatly increasing aortic diastolic pressure to levels above aortic systolic pressure."

Opening training schemes to change

We never notice the slippery slope into a comfortable rut. After medical school and internship, it is a relief to settle into a training scheme. Anaesthesia was my chosen pathway, and, after five years of anaesthesia training, I was well on my way to becoming a well rounded anaesthetist. Or so I liked to believe.

A burgeoning interest in anaesthesia for elderly patients led me to break my specialist registrar training with the intention of increasing my knowledge of general medicine and geriatrics and improving my clinical acumen. My colleagues greeted my decision with derision and curiosity. The geriatrician I was to work with was anxious that I would not jeopardise my career in anaesthesia by changing jobs at this juncture.

Was I brave or foolish? The new position has been the most enriching of my brief medical life. I learnt that there are many ways to take a patient's history—by firing questions in a structured format, or by approaching sensitive topics softly and interspersing my questions with chat about pets or radio programmes and how life has changed. I know now which will give me the information I require.

I became acquainted with the many socioeconomic difficulties experienced by elderly people: the loneliness that leads patients to present for medical care in order to have a conversation; the large physical and financial price for the drugs that are prescribed without a second thought.

Are these skills relevant to anaesthesia, with its high tech world of machines, pumps, and drugs? In one sense, it does not matter if they are not. The experience has changed me as a person and as a doctor. However, elderly patients account for a substantial proportion of those presenting for surgery and anaesthesia. From my new perspective, I now see that I can prescribe all the postoperative analgesia I desire, but who will ensure that an arthritic patient can open the tablet bottle or read the instructions?

Better communication and listening skills must benefit specialists of all denominations. We are exposed to a broad range of patients and illnesses as students and interns. But then we choose our specialty, put our heads down, and perhaps forget to look up.

Changing jobs merits encouragement. Training programmes need to recognise this fact and make provision for trainees to sample areas outside their chosen specialty. Then we will have doctors who recognise the challenges encountered in other specialties and who appreciate the best of both worlds.

Suzanne Crowe, Department of Anaesthesia, Our Lady's Hospital for Sick Children, Dublin, Republic of Ireland
suzbar@gofree.indigo.ie