

## CASE BASED LEARNING .....

### Syncope and palpitation in a patient following aortic valve replacement

Roger Hall, Mark, Earley, Hammersmith Hospital, London, UK

A usually very fit man aged 90 presented with syncope and angina of effort. He was found to have severe calcific aortic stenosis and associated coronary disease restricted to the left anterior descending (LAD) coronary artery.

He underwent an aortic valve replacement with tissue prosthesis and a single coronary graft to the LAD. He came off bypass without difficulty but on the third postoperative period, when he had left the intensive care unit and was making excellent progress mobilising, he had further episodes of syncope and also developed palpitations.

The significance of these symptoms and the diagnosis and treatment of these postoperative problems is discussed in an interactive case presentation.

The purpose of this interactive case presentation is to illustrate:

- The incidence, predisposing factors, and significance in the postoperative period of:
  - supraventricular arrhythmias
  - bradycardia and complete heart block
- The potential for prophylactic treatment to reduce the incidence of rhythm problems
- The management of supraventricular arrhythmias and particularly atrial fibrillation postoperatively
- When permanent pacing is needed for postoperative bradycardia.

This interactive case history is hosted on BMJ Learning—the best available learning website for medical professionals from the BMJ Group.

To access the interactive case, please use the **[Take this module on BMJ Learning]** link from the online article content box or table of contents.

#### References

- 1 **Bharucha DB**, Kowey PR. Management and prevention of atrial fibrillation after cardiovascular surgery. *Am J Cardiol* 2000;**85**:20D–24D.
- 2 **Maisel MH**, Rawn JD, Stevenson WG. Atrial fibrillation after cardiac surgery. *Ann Intern Med* 2001;**135**:1061–73.
- 3 **Groves PH**, Hall JJC. Atrial tachyarrhythmias after cardiac surgery. *Eur Heart J* 1991;**12**:458–63.
- 4 **Taylor AD**, Groen JG, Thorn SL, *et al*. New insights in the mechanisms of atrial fibrillation and flutter after coronary artery bypass graft surgery. *Heart* 2002;**88**:499–504.
- 5 **Suttorp MJ**, Kingma JH, Peels JO, *et al*. Effectiveness of sotalol in preventing supraventricular tachyarrhythmias shortly after coronary artery bypass grafting. *Am J Cardiol* 1991;**68**:1163–9.
- 6 **Morady F**. Prevention of atrial fibrillation in the postoperative cardiac patient: significance of oral class III antiarrhythmic agents. *Am J Cardiol* 1999;**84**:156R–60R.
- 7 **Daoud EG**, Strickberger SA, Mann KC, *et al*. Preoperative amiodarone as prophylaxis against atrial fibrillation after heart surgery. *N Engl J Med* 1997;**337**:1785–91.
- 8 **Giri S**, White M, Dunn AB, *et al*. Oral amiodarone for prevention of atrial fibrillation after open heart surgery, the atrial fibrillation suppression trial (AFIST): a randomised placebo controlled trial. *Lancet* 2001;**357**:830–6.
- 9 **Greenberg MD**, Katz NM, Luliano S, *et al*. Atrial pacing for the prevention of atrial fibrillation after cardiovascular surgery. *J Am Coll Cardiol* 2000;**35**:1416–22.
- 10 **Del Rizzo DF**, Nishimura S, Lau C, *et al*. Cardiac pacing following surgery for acquired heart disease. *J Card Surg* 1996;**11**:332–403.
- 11 **Akins CW**, Daggett WM, Vlahakes GJ. Cardiac operations in patients 80 years old and older. *Ann Thorac Surg* 1997;**64**:606–15.
- 12 **Kolh P**, Kerzmann A, Lahaye L, *et al*. Cardiac surgery in octogenarians. Peri-operative outcome and long-term results. *Eur Heart J* 2001;**22**:1235–43.
- 13 **Lewis JW**, Webb CR, Pickard SD, *et al*. Increased need for a permanent pacemaker after reoperative cardiac surgery. *J Thorac Cardiovasc Surg* 1998;**116**:74–81.
- 14 **Jaeger FJ**, Trohman RG, Brener S, *et al*. Permanent pacing following repeat cardiac valve surgery. *Am J Cardiol* 1994;**74**:505–7.
- 15 **Cooper JP**, Jayawickreme SR, Swanton RH. Permanent pacing in patients with tricuspid valve replacements. *Heart* 1995;**73**:169–72.
- 16 **Kirklin JW**, Barratt-Boyes BG. Aortic valve disease. In: *Cardiac surgery*, eds. Churchill Livingstone, 1993:534.
- 17 **Nair CK**, Sketch MH, Ahmed I, *et al*. Calcific valvular aortic stenosis with and without mitral annular calcium. *Am J Cardiol* 1987;**60**:865–70.
- 18 **Gordon RS**, Ivanov J, Cohen G, *et al*. Permanent pacing after a cardiac operation: predicting the use of permanent pacemakers. *Ann Thorac Surg* 1998;**66**:1698–704.
- 19 **Kim MH**, Deeb GM, Eagle KA, *et al*. Complete atrioventricular block after valvular heart surgery and the timing of pacemaker implantation. *Am J Cardiol* 2001;**87**:649–51.
- 20 **Glikson M**, Dearani JA, Hyberger LK, *et al*. Indications, effectiveness, and long-term dependency in permanent pacing after cardiac surgery. *Am J Cardiol* 1987;**80**:1309–13.