support, but the haemodynamic status had by then improved to the point where withdrawal would have been considered in any case.

Despite the absence of major pulmonary emboli at necropsy it is possible that the siting of the pump outflow cannula in the right ventricular outflow tract may have contributed to microembolism with an associated deterioration in pulmonary function. A filter in the pulmonary artery line might have reduced this risk. Furthermore, direct cannulation of the pulmonary artery, if necessary with the use of a Dacron conduit, would have prevented damage to the right ventricular outflow tract. In our case direct cannulation of the pulmonary artery was not possible on account of the siting of the aortocoronary bypass grafts (fig 1).

Most reported cases requiring either a right ventricular or a biventricular assist system have produced poor results^{9,10} and obviously more work is needed before the results of right ventricular assistance can approach those of left ventricular assistance. Our experience with radio-nuclide scanning agrees with a recent report⁶ in which the improvement in right ventricular function was documented two weeks and six months after operation following an episode of acute right ventricular failure. We also believe that serial technetium scanning during mechanical ventricular assistance may provide a useful index of ventricular function and be of value in determining the optimal time for discontinuing bypass.

References

- 1 Golding LR, Jacobs G, Groves LK, *et al.* Clinical results of

mechanical support of the failing left ventricle. *J Thorac Cardiovasc Surg* 1982;**83**:597-601.

- 2 Pennock JL, Pierce WS, Wisman CB, *et al.* Survival and complications following ventricular assist surgery for cardiogenic shock. *Ann Surg* 1983;**198**:469-78.
- 3 Rose DM, Colvin SB, Culliford AT, *et al.* Longterm survival with partial left heart bypass following peri-operative myocardial infarction and shock. *J Thorac Cardiovasc Surg* 1982;**83**:483-92.
- 4 Cohn JN, Guiha NH, Broder MI, *et al.* Right ventricular infarction. Clinical and haemodynamic features. *Am J Cardiol* 1974;**33**:209-14.
- 5 Flege JB, Wright CB, Reisinger TJ. Successful balloon counterpulsation for right ventricular failure. *Ann Thorac Surg* 1984;**37**:167-8.
- 6 Gaines WE, Pierce WS, Prophet GA, *et al.* Pulmonary circulatory support. A quantitative comparison of four methods. *J Thorac Cardiovasc Surg* 1984;**88**:958-62.
- 7 Miller DC, Moreno-Cabral RJ, Stinson EB, *et al.* Pulmonary artery balloon counterpulsation for acute right ventricular failure. *J Thorac Cardiovasc Surg* 1980;**80**:760-3.
- 8 O'Neill MJ, Pierce WS, Wisman CB, *et al.* Successful management of right ventricular failure with the ventricular assist pump following aortic valve replacement and coronary bypass grafting. *J Thorac Cardiovasc Surg* 1984;**87**:106-11.
- 9 Taguchi K, Hasegawa T, Fukunaga S, *et al.* Safe conduct of flow assist with prolonged ventricular bypass and experience with 34 patients. *Trans Am Soc Artif Intern Organs* 1982;**28**:100-3.
- 10 Pierce WS, Parr GVS, Myers JL, *et al.* Ventricular assist pumping in patients with cardiogenic shock after cardiac operations. *N Engl J Med* 1981;**305**:1606-10.
- 11 Moran JM, Opravil M, Gorman AJ, *et al.* Pulmonary artery balloon counterpulsation for right ventricular failure: II. Clinical experience. *Ann Thorac Surg* 1984;**38**:254-9.
- 12 Pennington DG, Merjavy JP, Swartz MT, *et al.* The importance of biventricular failure in patients with postoperative cardiogenic shock. *Ann Thorac Surg* 1985;**39**:16-26.

Book notice

A colour atlas of cardiac surgery: congenital heart disease. Vol 2. James L Monro and Gerald Shore. (Pp 192; £55.) Wolfe Medical Publications, 1984.

Together with the previously published *Coloured Atlas on Surgery for Acquired Heart Disease*, this volume is part of a series of medical and surgical atlases. Each of its 19 chapters is introduced by a brief explanatory text and simple but lucid line drawings before proceeding to describe the operative procedures for the more common congenital abnormalities. This is done by a sequence of coloured photographs, the outstanding quality of which is maintained throughout the book. Although diagrams or line drawings may not accurately portray how things appear,

they may still communicate a principle more effectively than can be done by a photograph. So while the book describes the surgical method with remarkable clarity, some of the underlying concepts do not always come over with equal force. In this sense it may not be completely comprehensive; nevertheless, this volume does make a unique and innovative contribution to a full understanding of the surgical procedures. For whom is this book written? The authors have "aimed at junior doctors starting cardiac surgery" but actually hope that it will be read by all and sundry. Few individuals who are not committed to cardiology are likely to invest in such an expensive book, but it should certainly stand alongside other texts of cardiac surgery on the shelves of the cardiology and cardiac surgical libraries.—JDW