FIGURE 1. Medial and superficial position of left atrium (LA) permits excellent exposure of left atrioventricular valve. LV, Arterial ventricle, anatomic right ventricle; RV, venous ventricle, anatomic left ventricle; RA, right atrium; Ao, aorta; CxA, circumflex artery; and ADCA, anterior descending coronary artery.

(v wave, 70 mm Hg; and y wave, 20 mm Hg). Oximetric data demonstrated absence of left-to-right shunt.

Angiocardiographic studies showed that the right atrium and superior and inferior venae cavae were in their normal positions and to the right of the left atrium (situs solitus). The venous ventricle was situated on the right side and posterocephalad to the arterial ventricle. The arterial ventriculogram demonstrated the presence of trabeculae and a crista supraventricularis compatible with an anatomic right ventricle. The systolic and diastolic volumes were greatly augmented. The aorta arose from the arterial ventricle and lay to the left and anterior of the main pulmonary artery. The convexity of the ascending aorta lay to the left of the spinal column. The aortic valve was situated cephalad to the pulmonary arterial valve and without continuity with the left atrioventricular valve.

Surgery was performed on Feb 1, 1975. The heart was approached through a median sternotomy. The external diameters of the ascending aorta and main pulmonary artery were 25 and 65 mm, respectively. The right atrium, the venous ventricle, and the inferior vena cava were situated posterior to the arterial ventricle. Cannulation of the superior vena cava was performed through the right atrial appendage, and the inferior vena cava was cannulated via the left femoral vein. The left-sided atrioventricular valve was tricuspid; it was easily replaced through the dilated and superficial left atrium with a No. 29 Björk prosthesis (Fig 1).

During the early postoperative period, the patient required digitals for the treatment of cardiac failure and tachyarrhythmia. The patient was discharged from the hospital on Feb 20, 1975 in good condition. A follow-up in July 1975 confirmed this result.

DISCUSSION

This type of cardiac malrotation has been called mixed dextrocardia with ventricular inversion,1 and dextrocardia with situs solitus and l-transposition.2 Corrected transposition of the great vessels associated with cardiac dextrorotation3 was the most frequent type of dextrocardia, occurring in 29 percent (15) of 51 autopsied cases.4 Frequently, in patients with inversion of the ventricles, the great vessels are also inverted and, in addition, transposed.

I insist that in corrected transposition of the great vessels with cardiac dextrorotation, replacement of the left atrioventricular valve can be performed easily from a technical standpoint. On the contrary, in corrected transposition associated with mirror-image dextrocardia (synonyms, mixed dextrocardia with atrial inversion; dextrocardia with situs inversus and d-transposition), exposure of the left atrioventricular area may be rather difficult.5

Domingo Liotta, M.D., F.C.C.P.
Hospital Italiano
Buenos Aires

REFERENCES

Blood Gas Analysis during Hemodialysis

To the Editor:

We read with interest the article entitled “Evidence for Pulmonary Microembolization during Hemodialysis” by Bischof et al in the March issue (Chest 67:335-337, 1975); however, we have published data which are at variance with their findings and interpretation. Measurement of respiratory gas exchange, as well as blood gas levels, reveals that...
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Usage in Pregnancy: Safety in pregnancy has not been established. Do not use except with caution, weighing patient benefit against potential risk to fetus. Studies in mice, rabbits and rats have shown no significant teratogenic effects of oral doses up to 50 mg/kg (310 times the recommended daily human inhalational dose). In rabbits, fetal loss and teratogenic effects have been observed at and above oral doses of 50 and 100 mg/kg, respectively.

Adverse Reactions: Adverse reactions such as tachycardia, hypertension, palpitations, nervousness, tremor, nausea, vomiting and bad taste have been reported. These reactions are similar to those noted with other sympathomimetic agents.

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All essays are coded and independently judged by four physicians specializing in cardiovascular and pulmonary diseases. The judges will evaluate the essays on merit alone, with no knowledge of author or school.

Announcements of the winners will be made following the decision of the judges in May, and subsequently, awards will be presented at the Annual Meeting of the College to be held in Atlanta, Georgia, October 24-29, 1976.

Suggested length of the essays is 2,000 to 2,500 words. The deadline for submitting manuscripts is March 31, 1976.

Write for an application form and/or additional information from: Committee on College Essay, American College of Chest Physicians, 911 Busse Highway, Park Ridge, Illinois 60068.

When writing please mention CHEST
due to an increase in oxygen consumption ($V_{O_2}$) and a decrease in carbon dioxide production ($V_{CO_2}$), the respiratory quotient ($V_{CO_2}/V_{O_2}$) falls from a normal mean of 0.82 to about 0.65. These changes occur early during hemodialysis and persist at least one hour after dialysis. When alveolar oxygen pressure is calculated from the measured $V_{CO_2}/V_{O_2}$, it decreases; arterial oxygen pressure ($PaO_2$) decreases, and no significant change in the alveolar-arterial oxygen pressure difference occurs. Our data are consistent with decreased alveolar ventilation and do not support a ventilation-perfusion abnormality which one would expect with microembolization.

Bischel and associates, however, do find that the use of filters prevents the significant fall in $PaO_2$ measured after dialysis. The reason for this is unclear and might be best approached by simultaneous measurement of both blood and respiratory gas levels.

Joseph M. Letteri, M.D.
Joel E. Sherlock, M.D.
and James W. Ledwith, M.D., F.C.C.P.
Renal and Pulmonary Divisions
Nassau County Medical Center
State University of New York at Stony Brook

REFERENCE

To the Editor:

Drs. Letteri, Sherlock, and Ledwith have commented on their observed changes in the alveolar oxygen pressure consequent to changes in the respiratory quotient. Our study was not designed to answer this question; and, indeed, it is most proper to measure the respiratory quotient if one were to point out changes in the alveolar-arterial oxygen pressure difference before, during, or after dialysis. Our study was designed to answer questions on the effect of a filter vs no filter. Our assumption of the respiratory quotient is then a systematic error which is effectively cancelled out by paired analysis.

We also note that the article by Sherlock et al1 describes the use of a specific commercial model of blood gas analyzer (Instrumentation Laboratories model 313). The function of various commercially available blood gas analyzers has been studied;2 the results are shown in Table 1.

We have repeatedly demonstrated that the specific model of blood gas analyzer used by Sherlock et al1 exceeds the estimate of arterial oxygen pressure ($PaO_2$) by an average of 11.5 mm Hg. Since this specific model of blood gas analyzer was used by these investigators, it is fair to assume that the data for $PaO_2$ reported by Letteri et al are also similarly in excess. Taking this fact into account, correction of their data would then agree with ours.

Margaret D. Bischel, M.D.
Lutheran General Hospital, Park Ridge, Ill
and John G. Mohler, M.D.
Los Angeles County-University of Southern California Medical Center, Los Angeles

REFERENCES

Ventricular Fibrillation Induced by a Defective Demand Pacemaker

To the Editor:

Although the occurrence of pacemaker-induced tachycardia or so-called "runaway" pacemakers is a rare event due to the modern design of pacemakers, it still may occur and has been seen in some pacemakers manufactured around 1972. The case we report here is that of a patient who, upon admission to the hospital, presented with a pacemaker rate of 210 beats per minute, which increased to 2,000 beats per minute within five minutes, followed by loss of capture and ventricular fibrillation.

CASE REPORT
A 44-year-old man with congenital heart block had a unipolar pacemaker implanted in February 1973 in another hospital. A few months after implantation, the patient devel-