aortic stenosis whether the origin of the second sound is aortic, pulmonary or both, but in any event, it may be well heard even when the stenosis is undoubtedly severe. Neither is the pulse a good guide as it may be in adults, for when the rate is rapid, the interval between beats is too short to allow recognition of a distinctive pattern. The radiogram may show a rounded ventricular shadow or left ventricular hypertrophy, but more often, and especially in young children, it is of little diagnostic value.

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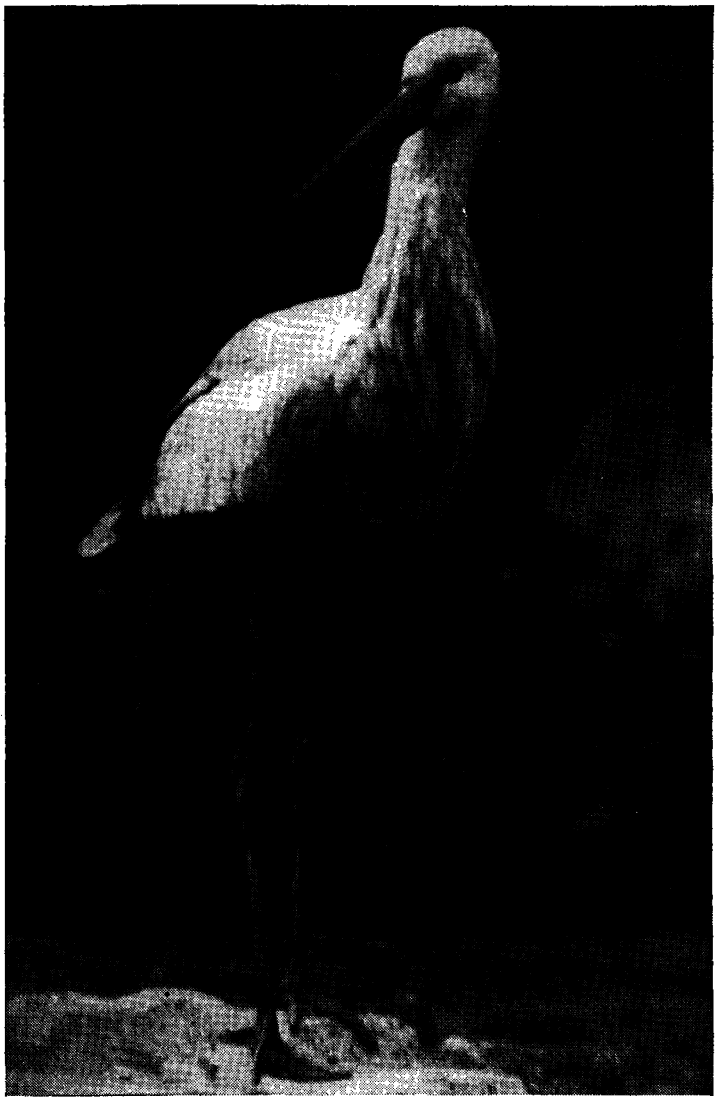

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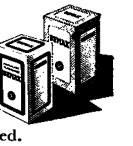

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(b) *Temporary Shunts.* Stranahan (1955) and his associates have described ingenious methods of diverting blood from the aorta, using an aorta from a pig or calf in order to permit the resection of aneurysms of the arch.

Sarnoff (1955) has suggested diverting blood from the left ventricle into the thoracic aorta with the intention of approaching the aortic valve in a dry field.

These methods may have a definite application in the repair or resection of an aneurysm of the aortic arch and in aortic valve surgery although their sphere of usefulness will be limited as methods for open cardiac surgery develop.

Artificial Valves

Narrowing of the cardiac valves is capable of correction in a reasonably high proportion of cases. Incompetence is unfortunately a much more complex phenomenon and one which is vastly more difficult to treat surgically.

Many ingenious methods to reduce the leaking of mitral valves have been described (Bailey, 1954; Harken, 1954; and Logan, 1952), but none has proved lastingly satisfactory.

Hufnagel (1954) has employed a carefully prepared ball valve inserted into the thoracic aorta beyond the left subclavian artery in cases of severe incapacitating aortic incompetence and has claimed considerable improvement in the survivors.

It is obvious that the surgical treatment of incompetence has yet to be satisfactorily solved.

Conclusion

There seems little doubt that cardiac surgery is on the eve of important and far reaching advances dependent upon the development of facilities for unhurried surgical procedures on a dry and motionless heart. Various procedures are available at the present time but all carry certain risks and hazards which make widespread application unwise. Even when open methods of cardiac surgery can be safely employed it is probable that the well established closed procedures will still be extensively used and the more elaborate open methods reserved for the correction of the more complicated abnormalities.

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its advocates and episiotomy should be done without hesitation. As soon as full dilatation of the cervix has occurred forceps can be applied but their routine use is unnecessary.

The development of pulmonary oedema during delivery or a few hours post-partum is a dramatic complication, especially in mitral stenosis. It is due to over-filling of the lesser circulation with blood returning in great quantities from the placental sinuses and from the uterine sinuses after the placenta has been removed and the uterus has retracted. Treatment has been described previously. The use of a sandbag across the abdomen or application of a thick pad and binder after delivery can fulfil little useful purpose.

The puerperium and subsequently. The patient is kept in bed for at least three weeks and until all signs of failure have gone. Nearly a quarter of all fatalities occur during labour and the 24 hours following it. Lactation should be avoided only where the mother is so ill that all means must be employed to conserve her strength. As Ward (1923) has pointed out, the disturbances entailed in making up artificial feeds at night and dealing with a child made more fretful by artificial feeding may prove more exhausting than lactation.

The Remote Outlook

On first consideration it might be expected that the strain of repeated pregnancies in a woman with heart disease would ultimately decrease the efficiency of the heart. But the cardiac reserve is not a fixed quantity, amounts of which are used up until it is exhausted. Gilchrist and Murray-Lyon (1933) tried to assess the rate of progression of fatal cases of rheumatic heart disease in parous women compared with nulliparous females and males. Allowing for deaths occurring before marriageable age the average age at death was: Males, 39.3 years; nulliparae, 42.1; parous women, 42.0. Reid's (1934) figures support this contention and so do those of Jensen (1949) who states that the death rate is not increased amongst those with high parity nor by the occurrence of twin pregnancy.

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