
Cardiac Catheterisation

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ANDRE COURNAND in his Nobel Lecture 1956 stated that "the Cardiac Catheter is the key in the lock". By turning the key, Cournand and others led us into a new frontier of understanding of normal and abnormal cardiac function.

Cardiac catheterisation was first performed in 1844 by Claude Bernard. The subject was a horse and both right and left ventricles were entered by a retrograde approach from the jugular vein and the carotid artery. An era of investigation of cardiovascular physiology in animals then followed resulting in the development of many techniques. (Pressure manometry and the Fick Cardiac output method to name but two).

In humans, the first cardiac catheterisation was accomplished by Werner Forssman in 1929, at Eberstwalde, near Berlin. He passed a catheter through one of his own left antecubital veins, guiding it by fluoroscopy, (he looked through a mirror held by his nurse in front of the fluoroscope) until it entered his right atrium. He then walked to the Radiology Department where the catheter position was documented.

The potential of Forssman's technique was appreciated by others, who separately, or in collaboration produced work which proved to be essential to our understanding of the haemodynamic changes of the cardiovascular system in health and disease. There are many individuals whose contribution should be recognised but their number is too great for an editorial.

Cardiac catheterisation is, in general, indicated when there is a need to confirm the presence of a clinically suspected condition, define its anatomical and physiological severity and determine the presence or absence of associated conditions.

Although few would disagree that consideration of heart surgery is an adequate reason for the performance of catheterisation — differences of opinion do however exist about whether all patients being considered for heart surgery should undergo preoperative catheterisation.

I would suggest that the risks of cardiac catheterisation are small compared to those of cardiac surgery in a patient with an incorrect clinical diagnosis, or in a patient in whom the presence of an unsuspected additional condition greatly prolongs and complicates the planned surgical approach.

The operating theatre is not a good place for surprises. Cardiac catheterisation provides the surgical team with precise data thereby promoting rational and efficient operative procedures.

In addition, the data obtained by cardiac catheterisation may be invaluable in the assessment of factors that will influence the prognosis, such as left ventricular function and the patency of the coronary arteries.

For these reasons, I am of the opinion that cardiac catheterisation should be performed in all patients in whom heart surgery is contemplated.

I am gratified that since April of 1980, the procedure of right and left cardiac catheterisation has been available in Bahrain. □□