continuing challenge to their judgement for many years to come.

One point worthy of emphasis is that there is no difference between a novel surgical procedure and a novel drug treatment as far as the need to apply to the ethics committee is concerned. In either case, if significant new ground is being broken and the results are potentially publishable there is a need for informed consent from the patient and this should be underwritten by ethics committee approval. Surgeons may long have viewed themselves as creative artists working free of constraint, and clearly they must, like all practitioners, be allowed a considerable degree of clinical freedom. It is difficult to construct a logical argument that applies different standards to surgical and medical innovative procedures, however.

The principles of obtaining informed consent for the evaluation of novel treatments involving children are quite clear. Firstly, when the child is judged too young or too sick to be personally involved in giving consent, informed consent from the parents or legal guardians is acceptable. Secondly, when the child is judged to be old enough and well enough to contribute to the decision making process, albeit in a limited way, an attempt should be made to

engage the child's opinion appropriately. Thirdly, every effort should be made to minimise the adverse effects of procedures undertaken solely for research purposes. Though an adult may be approached to submit to serial venepuncture for research purposes a child should generally not be expected to behave so altruistically. Everything possible should be done to minimise pain and discomfort.

To summarise, those contemplating the introduction of a novel treatment of any kind in paediatric cardiology should always consider whether or not ethics committee approval is required: when in doubt they should seek approval. They should ensure that their application to the ethics committee can be clearly understood by colleagues in other specialties and by lay people. In particular, they should ensure that the written information sheet for parents/patients provides a clear account of what is proposed. It must be honest about any important risks and written in plain English at a level that can be understood by a 12 year old.

P R F DEAR

*Chairman of the Clinical Research Ethics Committee
St James's University Hospital,
Beckett Street,
Leeds LS9 7TF*

STAMPS IN CARDIOLOGY

Leonardo da Vinci (1452–1519)

(A)

Cultural anniversaries were the theme of an East Germany set of four stamps issued in 1952. The 20 pfennig green stamp (A) marked the 500th anniversary of the birth of da Vinci.

In 1982 San Marino issued a Pioneers of Science set of 16 stamps, the second highest value of which featured Leonardo da Vinci (B). Other values included portraits of Hippocrates, Antoine Lavoisier, Marie Curie, Robert Koch, and Alexander Fleming.

Leonardo da Vinci is best known as a wonderful artist but his experiments, anatomical drawings, and notes (often in mirror writing) provide early descriptions of the structure and function of the heart and circulation. He termed the ventricles "the lower ventricles", the other chambers "the upper ventricles", the atrial appendages "the ears" and the heart as "... a muscle of pre-eminent power over other muscles". He was perhaps the first to describe a

(B)

congenital heart lesion. His drawing in *Quaderni d'Anatomia* (1513) depicts a perforating channel between the atria, representing a patent foramen ovale. His experiments with animal hearts, in which he allowed fragments of leaves in water to circulate through the heart, demonstrated that blood flow was uni-directional and defined cardiac valve function. His interest in anatomy was inspired by the anatomist Marcoantonio della Torre (1473–1511) who was professor of anatomy in Pisa and then Padua and who commissioned da Vinci to provide the illustrations for his text on anatomy based on dissection.

M K DAVIES
A HOLLMAN