

cability and perfected its technique by previous trials on animals. Accordingly I obtained a license and certificates a year ago in order to make the necessary experiments, but unfortunately other calls upon my time have not allowed me to do more than to make trial experiments of dividing stenosed valves in diseased hearts from the *post-mortem* theatre, and on healthy valves in the hearts of cats, and also to try the proposed operation in the dead animal. It may be some months longer before I can get anything more done, and I therefore think that it may be worth while to write this preliminary note, especially as, after all, if the operation is to be done in man, it will be surgeons who will do it, and they must, of course, make their own preliminary experiments, however fully the operation may be described by others, and each must find out for himself the method which he will employ in each particular case.

The first question that arises is whether the mitral orifice should be enlarged by elongating the natural opening, or whether the valves should be cut through their middle at right angles to the normal opening. I think that there can be little doubt that the former would be the better plan, but the latter is the more easily performed, and it might be sufficient to effect the desired purpose of facilitating the flow of blood from the auricle into the ventricle. The knives which I have used have been like tenotomy knives, but some which I have had made of ladies' bonnet pins were too thin and flexible for stenosed valves, although they were sufficiently strong to divide the normal valves in the hearts of cats. The cutting edge of some of these was only a quarter of an inch, but this is too short, and a cutting edge of from half an inch to an inch is really required. The main part of the valve can be divided with comparative ease, but the thickened edge is firm and it resists the knife. I have not yet decided on the best form of knife, and its form must depend to some extent upon whether the surgeon decides to operate from the auricle or from the ventricle. The latter is less likely to bleed, as the knife need not be much thicker than a needle, and a needle wound of the ventricle rarely gives rise to any bleeding. I have often observed this in animals, especially during the experiments of the Hyderabad Chloroform Commission. The same is the case in man, whilst a needle puncture in the auricle may give rise to much bleeding.\*

The plan which I have used (but only in the dead animal) for exposing the heart is that of Ninni of Naples, recommended by Rotter and described in the *Medical Review* for July, 1900, p. 400. It consists in making incisions from the left edge of the