Stokes (1853) said: "The facility of making a correct diagnosis between functional and organic disease is not so great as modern writers led us to believe, and we more often arrive at a just conclusion by instinctive skill, the result of experience and judgment than by communicable rules of diagnosis."

However, knowledge has advanced since that day, and largely by the work of MacKenzie and Lewis, aided by the electro-cardiograph, many problems have been solved, and we know that the guiding principle in prognosis should be based on the functional efficiency of the heart muscle.

Lewis says: "If a man takes exercise without undue discomfort, has no cardiac enlargement, no aortic disease and no mitral stenosis, and his doctor tells him that on that basis his heart is sound, the opinion will be justified in all but exceptional cases, and if a minor blunder is made, it is of less consequence than gravely to warn a man solely on the basis of a systolic murmur."

OBSERVATIONS ON THE EFFECTS OF RADIUM TREATMENT ON WAR INJURIES IN THE NEIGHBOURHOOD OF NERVES AND BLOOD-VESSELS.

BY WALTER C. STEVENSON, M.D.

That radium in suitable doses does not injure nerve tissue is shown by the work of Mme. Fabre and Dr. Paul Touchard on five cases of syringomyelia; "all of which improved, some to a remarkable degree. All showed increased mobility of the limbs, with diminution of stiffness. One patient's hand had been quite helpless in a main en griffe position, but after radium treatment she was able to flex, extend and separate her fingers. A second was able to resume his work as a draughtsman, after six months' disuse of pencil and compasses. Another
remarkable fact was the disappearance in one case of the trophic disturbances characteristic of syringomyelia."  

The conclusion that that powerful physical agent, the gamma rays, from Radium C., has some effect on injured nerve areas was forced on me, more or less by accident, in the following case:—

CASE I.—Private S., an unimaginative man, of low intelligence, fell off a transport waggon on 10th March, 1917, fractured the anatomical neck of his left humerus, and injured his branchial plexus. When admitted to the Special Military Surgical Hospital, Blackrock, over eight months later, he had limited movement of the shoulder, little power to move his wrist, and was unable to flex his thumb and fingers, especially at the distal joints. Sensation of hand and wrist, except over ulnar distribution, was impaired. His first three fingers were discoloured, and there were trophic changes of the nails of the second and third fingers. Graphs of the movements of the wrist and fingers were made on the 31st December, 1917, with the aid of a strip of lead, as is the routine in the massage department. On the 1st January, 1918, 100 millicuries of radium emanation, screened by 3 m.m. of lead in a flat applicator, kindly sent by Dr. Lynham, of the London Radium Institute, was applied for two hours in the axilla, on the front and back of the shoulder-joint, for six hours in all, with the idea of increasing movement in that joint. Two days later the masseuse brought the patient to me, and asked why he could flex and extend his wrist better, flex his fingers better, and why the discoloration of his fingers was less when radium was only applied to the shoulder. The graphs, which I have before me, taken on 5th January, 1918, are conclusive evidence of increase of voluntary movement, which cannot be explained by any change of weather or treatment, or, as they were not expected, by suggestion. The movement in the shoulder was practically unaltered, except that voluntary abduction was temporarily reduced from 63° to 59°.

It is difficult to explain the effect of radium in the fore-