ening in places, but the intimal change is relatively slight as compared to the media.

This is the type which one finds associated with senile gangrene, and I am very much inclined to believe that the obliterating endarteritis in these cases is really a thrombo-arteritis due to the direct injury to the vessel wall from the fracture of these small plaques of calcareous material or bone damaging the intima.

After this brief account of the pathological changes in the human arteries, I wish to pass on to the experimental production of arterial disease in animals, as it is here that we will find most light thrown upon the disease in man.

We may pass over the earlier researches as of uncertain value and come at once to Josuè's experiments with the intravenous injection of adrenalin in rabbits.

He found that by giving daily injections of a few minims of the 1 in 1,000 adrenalin solution he could in time produce extensive sclerosis and degeneration of the aorta, in some cases getting the aneurismal bulging of the vessel walls, and sometimes extensive dissecting aneurisms. His work was confirmed by a large number of observers. The experiments are easy to perform and there is no difficulty in getting the sclerosis. A study of the lesions showed that the degeneration was in the media, degeneration and calcification being almost confined to this coat. Josuè concluded at first that the action of the adrenalin was solely due to the repeated rises in pressure brought about by the drug. But the objection was soon raised that if it were due to the pressure then there should be not only some relation between the amount of the drug administered and the extent of the sclerosis, but also that in any given animal the condition should be more diffuse, instead of this it is distinctly patchy. Pathologists generally came to the view that the adrenalin action was chiefly a toxic one, and this is the view most generally held to-day, but, as we will see later, there is other and stronger evidence in favor of the effect of pressure.

In addition to the adrenalin a number of other substances have been used which produce a similar mesaortitis, e.g., pyrocatechin nicotin, digitalin and barium chloride. It will be noted, however, that these substances, although toxic, also have a pressure producing influence. I myself have obtained the same change in animals suffering from uranium nitrate nephritis.

Of great importance in this experimental work are some researches carried on by a former pupil of my own, Dr. Harvey in Cambridge. Whilst in my laboratory he published a piece of work upon the effect of tension upon the degeneration of elastic tissue when transplanted from