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vessel without much difficulty and applied the silk, three strands above, three below, and cut between. The vessel was very large, the largest I have ever seen. At the point of ligation it was as large as my thumb, and as I held the ligature in my hand and looked at the cut ends of the artery, I held my breath for a moment and anxiously entreated my assistant to keep the vessel under his fingers at Scarpa's space. The particular point to which I wish to call attention is the condition of the three coats. Each one was separate and distinct from its neighbor. So degenerate was the vessel that there was absolutely no apparent connection between the different tunics, no more than between a man's coat and his vest. I am happy to say that I had no hæmorrhage, neither then nor subsequently, and the wound healed by first intention, the floss silk giving no trouble. The man lived more than two months, and finally died of exhaustion from slow progressive gangrene, due to the inability of the anastomotic circulation to supply the limb, his friends refusing to permit further operative measures. This artery was the most utterly diseased I have ever seen, and I am how in my sixth year in the dissecting room, and have seen many hundred arteries. I am quite sure that I should have promptly cut through the vessel had I used a hard or round ligature, and I do not believe that any other method than that of B. and E. would have been successful. The walls of the vessel were brought together for the space of at least one-half an inch by the floss silk, and there was no injury inflicted on the vascular tunics softened as they were by fatty degeneration. At the time I thought, here is the method, if any, by which to ligate the aorta. It fulfils the indications pointed out in my remarks on the method of compression by apparatus. There is no doubt but that the method of B. and E. is that which We must use, if ever we are to ligate the aorta successfully. There now comes up the question as to whether the ligature on the vessel shall be permanent or temporary. If it be necessary to apply the ligature above the origin of the renals. there is no question in my mind that any permanent occlusion of the artery would result in death by uræmia. It is more than probable that in this situation we shall never be able to interfere with the circulation in this great vessel. If, however, the circulation in a vessel of this size may become re-established after a temporary ligature, which, lasting several hours, shall yet do no injury to the walls of the artery, it still may be possible to ligate above the renals, but not otherwise. We may gain some information on this point by experiment on animals, but we can never be certain of the There of the human subject until we have tried it. There is another method of diminishing the circulation in a vessel of large calibre, which may prove of service sel of large calibre, which may prove of service in such a contingency. In a water pipe

the velocity of the flow of fluid is diminished, if the pipe turn at an angle. The diminution increases with the degree of the angle, until when the angle becomes a right angle. almost the whole of the head due to the velocity of the stream is lost. I have thought that possibly advantage might be taken of this fact to so reduce the velocity in the blood current of the aorta, as to render it possible for the contents of an aneurismal sac to solidify by producing an antero-posterior angle in the vessel. Whether it is possible to produce such an angle by slipping under the vessel a sterilized glass rod or soft rubber tube, I do not know, but intend to make the experiment on animals. My apology for bringing these suggestions before the Society to-night, must be the intractable nature of these cases, and the failure of any ordinary means to be of use to us. Dr. Wyeth, in a personal communication to the writer, has suggested the possibility of making a gradual ligation so as to allow the collateral circulation to become established. His idea is to place one ligature around the vessel, which shall more nearly stop the circulation, and so on. As I have before stated, I do not believe it possible to establish sufficient collateral circulation by way of the intercostals and the anastomosis of the internal mammary and epigastric, to furnish sufficient blood supply to the kidneys for them to fulfil their func-Below the origin of the renals this suggestion. tion may be of service, although the history of Monteiro's case, which lived for eleven days and then died of secondary hæmorrhage, seems to show that such a proceeding is unnecessary, as far as securing collateral circulation is concerned. It may yet be possible to apply a ligature to the aorta by means of the method of B. and B., with success, for aneurisms of the aorta have been cured by compression and on the circulation in the vessel can be occluded by ligation without the risk to the viscera involved in compression through the abdominal wall, it seems justifiable to attempt the ligation in suitable cases, operating by modern methods, the broad soft ligature, and avoiding laceration of the arterial coats. The method of Macewen seems to be safe enough as far as the operation itself is concerned, which consists in irritating the interim of the sack by needles thrust through its walls. I have been able to find a record of but one case, which has been treated by this procedure and cured. Halsted, of Baltimore, writes me that he tried it unsuccessfully in one case.

To conclude, it seems to me, as if aneurisms of the thoracic aorta may be most safely attacked after medical treatment has failed, by the introduction of a small quantity of inelastic wire. Abdominal aneurisms may first be explored through a celiotomy wound, so as to determine their exact nature and relations, after which the