

short of apoplectic. Mr. Jameson meant to test the properties of this agent more fully in a day or two in a case for amputation; at the same time it was a remedy which ought to be used, he thought, with some caution. While the boy above alluded to was under its influence, there was each time an irresistible fit of crying, the tears ran down the cheeks. He had subsequently no recollection of what had occurred further than that the sensation had been a pleasurable one, and that the hearing was obstructed.

Mr. Cusack said it was by experience alone that we could hope to arrive at any definite results on this interesting subject; he would therefore only detain the society for a moment or two while he added the little that he himself had as yet any opportunity of ascertaining respecting it. A strong healthy peasant girl was brought to Steevens' Hospital, into whose foot a needle had passed some time before through the ball of the great toe along the sole of the foot. Notwithstanding the extensive use of the knife required here, amongst structures, too, so abundantly supplied with nerves, this girl, placed under the influence of the vapour, never winced or expressed the slightest sensation of pain. He might (Mr. Cusack said) as well have cut a piece of board, so complete was the insensibility. Mr. Cusack observed the blood to be of a very dark colour, and the muscles very flaccid; the dark colour of the blood, it was possible, he said, might have been partly owing to his having cut across a vein while incising the muscles.—*Dublin Medical Press.*

#### OBSERVATIONS ON THE EMPLOYMENT OF COMPRESSION IN ANEURISM.

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*Advantages of compression over the ligature—Compression effects the cure of aneurism by simpler and safer means than the ligature; this method of treatment more certain and more permanent than that by the operation—Cause of the return of pulsation in an aneurism subsequent to the operation—Objections to the treatment of aneurism by compression answered—Concluding remarks—Summary.*

Notwithstanding that the amount of evidence which has been adduced in favour of the treatment of aneurism by compression is perhaps greater than has ever been brought forward within so short a period in support of a novel method of treatment, the cases in which it has been employed, forming, I may say, one unbroken chain of successful results: yet surgeons who have not seen it used, or who are accustomed to rely solely upon the ligature, may be slow in adopting what they may still look upon as an innovation. I shall therefore now endeavour to point out the advantages which this method of treating aneurism has over the ligature; and by instituting some kind of comparison between them, endeavour to do away with the objections which have or may be urged against compression.

It will, I believe, be admitted, that an aneurism once formed, has a constant tendency to increase in size; that, as it enlarges, the parietes of the sac become thinned (more particularly if its progress has been rapid); and that these effects are due to the distending force of the blood exercised upon the interior of the sac. Now, if the latter can be taken off, the enlargement of the aneurismal sac would necessarily be put a stop to, before it had attained any considerable size; and its parietes would thus be prevented from becoming thinned. The first effect, then, of pressure upon the artery between the aneurism and the heart, is to diminish or take off the distending force of the blood, the tumour is immediately reduced in size, and becomes more or less flaccid; the distension from pressure to which the parts about it had been subjected being thus removed, the pain which many patients labouring under aneurism suffer from in the affected limb is relieved. When the aneurismal sac has thus been kept stationary for some time, although no other change should take place, its parietes will be strengthened rather than thinned; and the danger of rupture of the sac will be greatly diminished. Indeed many of the cases on record, where a circumscribed aneu-

rism became diffused, necessitating amputation of the limb, would probably have been saved by the timely application of compression to the artery between the aneurism and the heart. However, we know that the same measure which takes off the distending force of the blood from the interior of the sac, and which checks its further increase, will at the same time bring about other changes in the sac itself, which will not only prevent it from enlarging, but will, if persevered in, effect the cure of the disease.

That compression effects the cure of aneurism by more simple and safer means than the ligature—that the treatment also is more certain—and that the result is likely to be more permanent than when the ligature is employed—I shall now endeavour to prove.

That compression effects the cure of aneurism by more simple means than the ligature is evidenced by the facts—1st. That the mode in which the consolidation of the aneurism is brought about by compression is exactly the same as that in which a natural or spontaneous cure occurs; and 2dly, because when a cure is effected by compression, the vessel is obliterated merely at the site of the aneurism; whereas when a ligature is applied in the usual situation at some distance from the tumour, the artery is obliterated both at the seat of the ligature and at the seat of the aneurism. Hence it is easy to understand why, when secondary hæmorrhage followed the operation, the application of a second ligature higher up so seldom succeeded; and we can hardly be surprised at gangrene attacking a limb, the main artery of which is obliterated at three different points.

That compression effects the cure of aneurism by safer means than the ligature is also evident, because its employment can be intermitted and resumed according to circumstances; and because no ill consequences have hitherto resulted from its use. On the other hand, the ligature of a large artery is always a precarious operation; when it is once applied, we must await its separation before the patient can be considered out of danger; and when it fails, which frequently happens, the case almost always terminates unfavourably, not from the increase of the disease, but from the operation performed for its relief. The artery in which aneurism (after the aorta) is most frequent, is the popliteal, and the ligature of the femoral artery for popliteal aneurism is more frequently unsuccessful than that of any other artery of equal size. Mr. Benjamin Phillips collected fifty-nine cases from various sources in which this vessel had been tied, in thirty-nine of which it failed; and although (as Mr. Storks observes) the accuracy of these statistics may be denied, "yet every surgeon must allow that the deligation of a main artery for aneurism is an operation (notwithstanding the successful results some practitioners can boast of) attended with great risk." On the other hand, I have given a list of twenty-seven cases of aneurism treated by compression of the femoral artery, in twenty-five of which it succeeded perfectly; of the other two, one died of erysipelas before the cure was completed; the other was operated on at the patient's urgent request, and recovered. A mode of treatment therefore which is exempt from all risk has many advantages on the score of humanity, which alone ought to constitute a strong argument in its favour.

The treatment of aneurism by compression is more certain than that by the ligature. We have already seen that the operation by ligature, however carefully performed, is a precarious one, and that it frequently fails; that secondary hæmorrhage from ulceration of the artery at the site of the ligature or phlebitis not unfrequently follow it; or that suppuration of the sac, hæmorrhage from it, or gangrene of the extremity, may ensue. Now, none of these unfortunate results have ever attended the treatment by compression, nor are any of them ever likely to follow it; because, in the first place, no injury whatever is inflicted upon either the artery or vein at the site of the pressure; and secondly, because the aneurismal sac, and the part of the artery from which it springs, are gradually filled up by fibrine, separated from the blood and deposited in the same way as when nature cures internal aneurism.

That a cure effected by compression is more likely to be permanent than when the ligature has been used, and that pulsation cannot return after the employment of compression, as sometimes has happened after the operation, might be inferred from the manner in which the cessation of pulsation is brought about; and it is proved by the pathological facts already adduced. In one instance, where the patient had been under treatment by compression, but died previous to the cessation of pulsation in the