

and kept her hand in it for a half-hour at a time; and it is evident that in this way the gangrene occurred. On September 13th, when she was first seen (the applications of the carbolic acid had been carried out daily for one week in August), there was beginning gangrene in the tips of the ring and little fingers, with swelling of the other fingers. She was advised to go into the ward, but she refused and was not seen again until some time in October, when she turned up at the Out-door Clinic. The gangrene now was quite definite, though it had not advanced to any extent, and the rest of the fingers and part of the body of the hand were swollen. There was considerable pain in the fingers and hand, not continuous, but rather of an intermittent cramp-like nature. Towards the end of December she was admitted to the ward with a well defined line of demarcation cutting of the tips of the two fingers mentioned. The rest of the fingers and the hand were dry, glazed and scaly. The question of Raynaud's disease coming up, the patient was closely questioned, and it was found that she had suffered from indefinite pains and numbness and tingling in the other hand as well and also in both feet. She admitted that two of the left hand fingers occasionally became blue, or at times white. These symptoms were indefinite, and had not left any objective signs. It now seemed to us that this was not a case of carbolic acid gangrene purely, and Raynaud's disease suggested itself as a probability. On December 29th the tips of the ring and little fingers were amputated beyond the line of demarcation. Gangrene of the stumps immediately occurred; and pain remained severe and persistent, so that on January 9th the whole of the fingers were removed; what was remarkable was that at the operation there was no arterial bleeding, and but little capillary or venous oozing, though the tissues looked sound. At this time the tip of the index finger too was amputated, and here also there was no bleeding. The middle finger was slightly reddish and swollen, but otherwise there was no sign of gangrene. The amputated fingers were dissected, and no gross arterial disease could be found. It was now noticed that the radial could not be felt at the wrist, and that the brachial was much smaller on the right side than on the left. It was also noticed in the neck that the subclavians ran about an inch above the clavicle on either side. However, physical and X-ray examination showed that there was no aneurysm, nor cervical rib which might cause a local obstruction. There was demonstrated, however, a very low position of the clavicles; that is, they ran apparently in the skiagram below the third rib instead of through the second. This was controlled by comparison with the normal. During the past ten