CERVICAL RIBS AND THEIR EFFECTS ON THE GREAT VESSELS OF THE NECK.

By WALTER BROADBENT, M.A., M.D., M.R.C.P.,
ASSISTANT PHYSICIAN, SUSSEX COUNTY HOSPITAL, BRIGHTON.

A FEW days ago a lady consulted me about a throbbing in her neck, which she said was very conspicuous when she was in evening dress and was a frequent subject of remark among her friends. When the neck was exposed, very marked pulsation was seen just above the sternum, also a pulsating swelling, extending for 2 in. upwards, above the inner end of the right clavicle, looking at first like an aneurysm of the innominate artery. On examining this swelling, the right carotid and subclavian arteries were found to come off from its upper end, and the

subclavian was seen coursing downwards along the front edge of the trapezius, to disappear under the clavicle at about the junction of its outer and middle thirds. On examining the left side of the neck, the left subclavian artery was found to take a similar course; it was seen to come to the surface at a point 2 in. above the clavicle, and to run down the front of the trapezius, as on the right side. The pulsation above the manubrium was due to exposure of the aorta; it extended upwards for 1 in. on the right side, and was continuous with the innominate pulsation, while towards the left it was less and less marked, and was not visibly connected with the pulsation of the left subclavian. The subclavian veins could not be traced, but they did not accompany their arteries.

Over the innominate artery and right subclavian and carotid a very loud systolic murmur was audible, followed by the second sound. A less loud systolic murmur was heard over the exposed aorta, a loud second sound, and also a murmur, diastolic in time, rather like the venous hum of anaemia, but apparently produced in the aorta. In the left carotid a faint murmur was heard, but in the left subclavian again a loud systolic. The pulses were equal and their tracings were not abnormal.

Smooth hard bodies, which were evidently cervical ribs, could be felt below the subclavian arteries; they made no difference to the usual contour of the neck, and deep palpation was necessary to trace them, so that, if the patient had been elderly and fat-necked, a correct diagnosis would have been difficult, the pulsation of the innominate being so striking, unless the abnormal position of the left subclavian had been noticed. No pain had been caused in the neck or arms, and there was no evidence of any pressure on the brachial plexus. The systolic murmurs seem to be caused by the sharp bend which the subclavian arteries take over the ribs.

Cervical ribs arise from the seventh cervical vertebra, they are prolongations of part of the transverse processes as separate bones, the part in front of the vertebro-arterial foramen; sometimes there is a nearly complete separate rib on one side, and only a small increase in length of the transverse process on the other; sometimes there are the two ribs as in this case. They may be joined by cartilage to the sternum or may end on the first rib at the scalene tubercle.

The only other instance of cervical ribs which has come under my observation was a female subject in the dissecting room eighteen years ago. In sketches made then it is seen that the scalenus anticus and scalenus medius are both inserted partly into the cervical rib, and hold the subclavian artery between them with the seventh cervical nerve just above it and the eighth cervical and first dorsal below. The seventh cervical vertebra and its ribs are considerably above the level of the top of the sternum, and the subclavian arteries are thus raised high in the neck. The ribs slant downwards in their progress forwards and terminate before they reach the sternum in thin cartilage, the subclavian veins being in front of the scalenus anticus are not held up, but only have to cross the thin front end of the ribs close to the sternum, and are thus very little raised above their normal position and remain concealed behind the clavicle, which explains why they are not visible in the present case. In the sketch a portion of the serratus magnus is also inserted into the cervical rib.

Since writing the above my attention has been called to an interesting account of four cases of cervical ribs by Dr. W. Thorburn in the *Proceedings of the Medico-Chirurgical Society* for 1905. In two of these the cervical ribs, by pressure on the first dorsal nerve, had caused pain down the inner side of the arm and atrophy of the thenar and hypothenar muscles; these cases he had successfully relieved by removal of the ribs. In the discussion also a case was mentioned in which a mistaken diagnosis of aneurysm had been made.

A CASE OF ONE CEREBRAL HEMISPHERE SUPPLYING BOTH SIDES OF THE BODY.

By G. H. GRILLS, M.D.,

SENIOR MEDICAL OFFICER, COUNTY ASYLUM, CHESTER.

THE following case is of interest, not only because of its rarity, but also on account of the metaphysical problems suggested by it, and the naked-eye anatomical evidence it affords of some of the relations of cerebrum and cerebellum, etc.

A woman aged 42 years at death, under my care for two years in Chester County Asylum, presented the following clinical picture:

In 1879 she was certified as an imbecile, being then 19 years of age; at that time she was able to answer questions, but in a childish manner. On admission she was described as "epileptic," but the nurse in whose charge she has been for twenty years states that she never knew her to have a fit. During the two years she was under my care I considered her a congenital imbecile with spastic paresis of the right side.

She was able to mix with the other patients and walk about the grounds. She could use both arm and leg of the right side, but they were slightly contracted and stiff; she did not make such skilled movements with them as with the left; they were equally well nourished. Sensibility was normal, so far as one could make out, but she had a great dislike of anything cold. Knee jerks and plantar reflexes showed no appreciable difference on the two sides, and were apparently normal. She was not ataxic in gait. Mentally she was imbecile, slow, and stupid, but understood spoken language, and sometimes spoke even of her old associates before admission, recalling them by their correct names.

Some time before death, she weighed 9 st. 10 lb., being 4 ft. 11 in. in height. About a week before her death she began to walk about in a drunken fashion, rapidly became quite helpless, and died, the cause of her death being certified as "congenital malformation of the brain."

Post-mortem and microscopic examination showed that all the organs were healthy and normal with the exception