CASE DEMONSTRATED AT F.R.C.S. CLASS.

Case of Primary Thrombosis of Brachial Artery.

Patient, æt 51 years, Clock-maker.

History: 3 weeks previously sudden onset of pain in left wrist radiating to the fingers, which became numb. There was also cramp in these fingers—a sudden involuntary contraction which relaxed after a few minutes. The cramp and numbness recurred on three or four occasions during the next ten days, but the pain in the wrist gradually disappeared. The patient noticed that the left hand was colder than the right.

Past History. Left lower limb amputated at one year of age for “inflammation of thigh bone.” He has used a crutch ever since, *i.e.*, for 50 years.

On examination. The patient was a spare, rather pale man. Nothing abnormal was found in the neck and chest. The left hand and lower half of forearm was definitely colder than the right. The radial pulse was found to be absent, and no pulse was felt in the brachial artery at the elbow, nor in this artery in the middle of the upper arm. The axillary pulse was normal. The pulse was found to disappear suddenly at the commencement of the brachial artery, *i.e.*, at a point immediately below the lower border of the *teres major* muscle. At this point a spindle-shaped swelling, about two inches long, was felt in the line of the artery, which was slightly tender. The skin on the inner side of the arm at this level was brownish in colour and slightly thickened—the result of prolonged pressure of the crutch. There were no sensory changes in the limb and no sign of muscular paresis in the forearm nor in the small muscles of the hand. The skin of the fingers and the hand was a little paler than on the sound side, but there was no cyanosis and the circulation was quite adequate. The Wassermann reaction was negative and X-ray examination showed no evidence of calcification in the arteries of the limb. The right radial pulse was normal and this artery was not thickened.

Discussion. The presence of the swelling in the brachial artery at a point where there was known to have been prolonged irritation by pressure of the crutch, associated with absence of pulsation in the vessel below this level, established the presence of occlusion of the artery at this point by a thrombus. The possibility of embolism was considered, but this condition usually occurs at a bifurcation of an artery, and is accompanied by sudden intense pain at the site of the block. Moreover, it is ordinarily associated with heart disease.

Most of the candidates failed to notice the obliteration of the radial pulse, which was the key to the diagnosis, nor did they observe the coldness of the hand. They suspected a nerve lesion and concentrated their attention on the exclusion of such conditions as “crutch palsy,” cervical rib, syringomyelia, etc.

Those who had observed the absence of the radial pulse failed, for the most part, to follow this up in the obvious way by noting the exact level at which the pulse disappeared.

Two suggestions were made by the few candidates who recognised that an arterial lesion was present:—

1. that the condition was thrombo-angiitis obliterans (Buerger's disease);
2. that the condition was of the nature of Raynaud's disease.

The former condition very rarely affects the vessels of the upper limbs, and the latter is practically confined to women, and the vascular changes are intermittent.

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