

Reconsideration of Intermittent Claudication in the Calf

—A Comparison of Arteriogram and Xe-133 Clearance Curve—

M. HIRAI, I. BAN, Y. NAKATA, J. MATUBARA, K. SHINJO,
S. KAWAI, S. SUZUKI and S. SHIONOYA.

Department of Surgery, Nagoya University Branch Hospital.

In this paper the diagnostic value for intermittent claudication in the calf due to peripheral vascular diseases of the legs was compared between Xe-133 clearance method and arteriography. Fifty-four limbs of 43 patients with occlusion proximal to the popliteal artery were studied. They were classified into 3 groups according to the degree of claudication—no claudication group (7 limbs), mild to moderate claudication group (17; claudication distance 150m) and severe claudication group (30; claudication distance 100 m). Arteries in arteriogram were divided into 6 segments—abdominal aorta, common iliac, external iliac, deep femoral, superficial femoral and popliteal arteries. All 12 limbs with more than 3 segments of disease had severe intermittent claudication in the calf. However, no

difference of the degrees of claudication was shown between one and two segments of disease. As collateral blood supply could not be evaluated precisely, it was difficult to determine the degree of claudication by arteriograms.

In contrast to this there was good correlation between Xe-133 clearance curve in the anterior tibial muscle and the degree of claudication.

However, there was no significant difference of Xe-133 clearance curve between moderate and mild claudication groups. This finding seemed to indicate that in these patients many factors—muscle strength, body weight, manner of walking, psychological factors etc—interacted in determining the claudication in addition to muscle circulatory insufficiency.