"Contribution of arteriography in evaluating circulatory reserves in patients with chronic obliterating arteriopathy of inferior limbs"

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- Studies were carried out upon 421 patients, of whom 345 had chronic atherosclerotic obliterating arteriopathy (AOA), 54 had diabetic arteriopathy (DA) and 22 had obliterating thrombangeitis (OTA).
- All cases were investigated using modern exploratory methods, and arteriographic illustrations are from author’s collection.
- There are significant etiologic differences depending on age groups.
- As expected, in patients with atherosclerotic obliterating arteriopathy and those with diabetic arteriopathy the average age was 66.5 years and 64.8 years respectively, with a standard deviation of 9 and 10 years, respectively. Therefore, the data correlates with the literature, the frequency of this disease being higher between 55 and 75 years, i.e. in older patients.
- In patients with OTA the average age was 46 years, with a standard deviation of 8 years, thus the onset age of this disease is approximately 40 years, which concurs with theoretical data.
- Arterial hypertension, as a cardiovascular risk factor, was present in about a half of the patients with AOA, in more than 60% of those with DA and in much lower percentages in patients with OTA.
- Total cholesterol was raised in patients with DA and AOA, with average values of 206.2 mg/dl and 186.7 mg/dl respectively, and was lowest in patients with OTA (average value 168.2 mg/dl), but without statistically significant differences.
- Serum triglyceride levels were highest in patients with DA (diabetes mellitus is characterized by atherogenous dyslipidemia, in which there is a raise in triglycerids, a lowering of HDL cholesterol and a raise of small dense particles), and the average value was 223.9 mg/dl. Triglyceride levels were slightly raised in patients with AOA, with an average value of 191.3 mg/dl and
within normal limits in patients with OTA, with an average value of 138.6 mg/dl.

- As expected, glycemia was highest in patients with DA, with an average value of 171.2 mg/100 ml, and normal in the other two categories – AOA 98.8 mg/100 ml and OTA 99.2 mg/100 ml (average values).

- Most of the patients are in stage IV of the disease and fewer in stages III and II. We consider that the explanation is, on one hand, that the 2nd Medical Clinic of Tg. Mureș, where cases were selected from, is a regional angiologic center, and as such it concentrates more serious cases of arteriopathy and, on the other hand, all cases comprised in the study had undergone arteriography, which is performed in patients with advanced evolution stages.

- In most cases the disease was bilateral in all three categories, previous amputation being more frequent in patients with DA.

- Doppler index (DI) was highest in patients with TAO, and was, probably, falsely raised in patients with DA (Mönckeberg mediosclerosis).

- With regards to arterial involvement: in patients with AOA the obstruction was predominantly localized proximally (iliac external artery, femoral superficial artery, femoral common artery); in patients with DA the obstruction was predominantly distal (tibial anterior artery, tibial posterior artery, peroneal artery and pedious artery) and in patients with OTA the obstruction is distal (popliteal artery and farther).

- With regards to localization/number of arteries involved, in patients with AOA when two arteries are involved the most frequent combination is femoral superficial + pedious arteries (39.6% of cases), in the involvement of three arteries pedious + tibial anterior + tibial posterior arteries (35.2% of cases) and in four arteries femoral superficial + pedious + tibial anterior + tibial posterior arteries (62.2% of cases).

- With regards to localization/number of arteries involved, in patients with DA when two arteries are involved the most frequent combination is pedious + tibial anterior arteries in 31.5% of cases, in three arteries femoral superficial + tibial anterior + tibial posterior arteries (65.3% of cases), and in four arteries
femoral superficial + pedious + tibial anterior + tibial posterior arteries, in 50% of cases.

- With regards to localization/number of arteries involved, in patients with OTA when two arteries are involved the most frequent combination is pedious + tibial anterior arteries in 62.5% of cases, in three arteries pedious + tibial anterior + tibial posterior arteries (60% of cases), and in four arteries pedious + tibial anterior + tibial posterior + peroneal arteries in 100% of cases.

- Minimal DI decreases in proportion with the stage of the disease in all three categories of patients. Minimal Doppler index when two, three or four vessels are involved is the smallest in patients with AOA and highest in those with OTA when two vessels are affected, and respectively in patients with DA when three or four vessels are involved.

- Collateral vessels are absent in most of the patients with OTA and DA and are best developed in patients with AOA.