

Percutaneous Recanalization in Diabetic Patients with Critical Limb Ischemia: Comparison between Angiographic and Clinical Results according to three different Classification Systems Elisabetta Iacopi¹, Irene Bargellini², Alberto Coppelli¹, Rosa Cervelli², Loredana Rizzo¹, Roberto Cioni² and Alberto Piaggese¹.

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Aim:-To evaluate the ability of three different angiographic classifications to describing the actual pattern of diabetic macro-angiopathy(DMA) and to test their prognostic value towards clinical outcomes of diabetic foot (DF) patients with critical limb ischaemia (CLI). **Methods:** -We traced back all DF patients with CLI submitted to percutaneous trans luminal angioplasty (PTA) in the Section of Interventional Radiology of our Hospital in the years 2009 - 2010. DF lesions were classified according to the Texas University Score System (TUSS). DMA severity was assessed according to three different classification systems based on angiographic pattern: the *Trans Atlantic Society Consensus II* (TASC II), the *Joint Vascular Society Council* (JVSC), and the morphological classification proposed by Graziani et al. We eventually correlated the clinical results (healing rate, healing time, rate and level of amputations), with the severity of vascular involvement before and after the revascularization procedures as expressed by the three different classifications. **Results:** -We evaluated 202 consecutive PTA performed in 166 diabetic patients (Male/female 115/51, mean age 72.8±9.8 yrs, duration of diabetes 20.5±12.1 yrs, HbA1c 7.8±1.8%). 43.6% of FL were scored as D3 according to TUSS and involved the forefoot in 78.7% of the cases. TASC II was not applicable in 55.4% of patients before and in no patient after PTA because of the absence of sovra-popliteal arterial stenosis. The mean score assigned with JVSC was 7.8±1.7 before and 4.8±2.3 (p<0.01) after PTA while according to the Graziani classification we observed a pre-procedural mean score of 4.8±0.9 and a post-procedural one of 1.4±0.5 (p<0.01). The immediate technical success rate of PTAs was 93.6%. Patients were followed up for 13.4±9.7 months. The complete healing of lesions was reached by 66.8% of patients with a healing time of 28.4±23.7 weeks, while 3.9% of them needed to undergo a major amputation. Patients healed after a minor amputations were 47%. Among all the clinical and angiographic variables included in the analysis, only JVSC scores were significantly associated to the clinical outcome (p=0.04). **Conclusions:** -TASC II is inadequate to describe vascular involvement in diabetic patients with CLI. While both the other classifications are effective in describing both basal and post-PTA conditions of DMA, only JVSC is a reliable predictor of outcome in DF patients with CLI.