Letter to the Editor

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Effects of Iloprost on Skin Microcirculation

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Prostanoids like alprostadil and iloprost are often used in patients with peripheral arterial occlusive disease who are no candidates for surgery or angioplasty. Melillo et al. [1] stated that evidence about the effect of intravenous prostanoids on cutaneous $P(7/8)$ in critical limb ischemia is scarce and somewhat inconsistent. Unfortunately, their report on $tcP < 3/4$ and $tcPC(3/4)$ during treatment of critical limb ischemia with iloprost does not elucidate this problem. They found that $tcPC(1/2)$ in the supine position erratically changed during the treatment period with an increase in only three out of eight limbs.

The main disadvantage of this study is that the authors did not use the same dose of iloprost for all patients. Their drug infusion rate varied between 1.0 and 2.0 ng/kg body weight/min. They adopted the manufacturer's instruction to titrate individually to the maximal tolerated dose.

There are not only interindividual differences of microcirculatory responses to iloprost but also a marked dose dependency. It is some years ago that we reported on effects of different doses of iloprost on skin micro-circulation of healthy volunteers and patients with peripheral occlusive disease of different degrees [2]. We found quite variable reactions in the patient group, too. $tcP < 3/4$ (37°C) decreased in two, but increased in 6 patients, with a maximum either at 0.25-0.5 ng/kg/min ($n = 3$) or at the highest dose (1.0 or 2.0 ng/kg/min, $n = 3$). Mean laser Doppler flux was increased, although the reaction was not consistent. We observed an increase of both capillary density and blood cell velocity. In some patients effects of the infusion were pronounced and were visible at low doses, but in others effects did not appear or were found only at the highest dose, when adverse reactions were already present.

Effects of iloprost on skin microcirculation in patients with peripheral arterial occlusive disease are variable to a large extent. Unfortunately, so far predictive parameters are not known. However, from our study as well as from the clinical point of view we feel that the titration of iloprost dosage according to the side effects is not the best way. The question of whether positive effects on the cutaneous microcirculation are predictors of the clinical efficacy is still unsolved. If microcirculatory responders were also clinical responders the adequate dose might be lower (0.25-0.5 ng/kg/min) than those actually employed. This would be desired because side effects are dose-dependent and occur in more than 70% of patients treated with the titrated dose [3]. Actually a recently presented study did not reveal any differences in clinical outcome between low dose and high dose iloprost therapy and the authors concluded that the optimal dose would be < 1.0 ng/kg/min [4].

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