Ottava Giornata della Ricerca della Svizzera Italiana
Venerdì 9 marzo 2018

Modulo per la sottomissione abstract di ricerca Dr. med. (MD)*
**I lavori di tesi possono essere sottomessi solo se conclusi, anche se non ancora accettati da un'università, e solo sotto supervisione di docente attivo in Ticino.*

Titolo (massimo **15 parole**)

Long-term pre- and postconditioning with low doses of Erythropoietin protects ischemic musculocutaneous tissue from necrosis

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Testo (massimo **250 parole**, preferibilmente in italiano (accettato anche in inglese), suddiviso in Introduzione, ***Metodi***, ***Risultati***, ***Conclusioni*** e ***Finanziamento***

Introduction: It has been shown that pre- and postconditioning of ischemically challenged tissue with erythropoietin (EPO) is able to reduce necrosis in a dose-dependent manner. The aim of this study was to determine the tissue-protective effects of different EPO dosages and administration regimes.
Methods: Three groups of six C57Bl/6-mice each were analyzed. 1. Untreated control group; 2. pre- and postconditioning with initial high doses of EPO (starting at 2500 I.U./kg bw i.p.) and subsequent low doses of EPO (125 I.U./kg bw i.p.) (EPO-high-dose); 3. pre- and postconditioning with low doses of EPO (125 I.U./kg bw i.p.) (EPO-low-dose). Randomly perfused musculo-cutaneous flaps were mounted into dorsal skinfold chambers undergoing acute persistent ischemia and developing ~50% necrosis without treatment. Intravital epi-fluorescence microscopy was performed at day 1, 3, 5, 7 and 10 after surgery, assessing flap necrosis, microcirculation and angiogenesis. The hematocrit was measured at day 0, 3, 7 and 10.
Results: Only the EPO-low-dose regimen was associated with a significant reduction of necrosis when compared to untreated controls. EPO-low-dose showed a higher increase, both in arteriolar diameter and velocity, resulting in a significantly increased arteriolar blood flow and a significantly higher functional capillary density of the critically perfused zone. EPO-induced angiogenesis was significantly increased in EPO-low-dose at day 7 and day 10. Only EPO-high-dose reached a significant hematocrit increase by day 10.
Conclusion: Tissue pre- and postconditioning with low doses of EPO protects critically perfused musculo-cutaneous tissue by maintaining capillary perfusion as a consequence of increased arteriolar blood flow mediated by NO-expression.

Funding: University resources

Visto superiore (prego indicare Nome e Cognome del superiore)

Prof. Dr. med. Yves Harder

Criteri per sottomissione Abstract:
NO Case report
NO Abstract senza nessun risultato
VISTO da un superiore

Invio Abstract