The aim of this study was to evaluate the analgesic effect of thermotherapy on vascular access cannulation" Tapia González et al (2018).

Abstract:

INTRODUCTION AND OBJECTIVES: Vascular access is essential to perform an adequate hemodialysis. Needle cannulation in vascular access is usually painful. There is little scientific evidence on the analgesic effect of thermotherapy. The aim of this study was to evaluate the analgesic effect of thermotherapy on vascular access cannulation.

METHODS: We performed a 2-week single center prospective study. Demographic data and vascular access location were collected. The main outcome was pain perceived in vascular access cannulation measured by the visual analog scale. We performed two phases of study: phase I was performed with usual cannulation procedure, and in phase II, we applied local thermotherapy for 15 min (hot packs: 60 s, 600 W). Also, main hemodynamic data, local, and vascular access-related complications were recorded.

RESULTS: A total of 34 patients were enrolled, with a mean age of 67.3 ± 16.4 years and 49.1 ± 66.3 months on hemodialysis. Main cardiovascular risk factors are hypertension (81.8%) and diabetes mellitus (39.4%). Most common vascular access is left radiocephalic fistula (45.5%). Mean weekly/patient cannulation is 6.03 ± 0.2. Mean visual analog scale is 3.8 ± 2.4. At the end of the study, thermotherapy on the vascular access revealed a significant

decrease in visual analog scale (3.9 ± 2.4 vs 2.6 ± 2.0, p = 0.002), without hemodynamic changes pre- and post-intervention, nor changes in analgesic or antihypertensive treatment. One patient had a mild surface erythema. No further complications related to vascular access were observed.

CONCLUSION: (1) Thermotherapy on the vascular access reduced the pain caused by needle cannulation in our patients, without complications related to vascular access. (2) We will consider its clinical application in those painful vascular access cannulations at our hemodialysis unit. (3) Further studies are required to assess other potential beneficial effects added to thermotherapy in vascular access cannulation procedure.

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Reference:
Tapia González, I., Esteve Simó, V., Moreno Guzman, F., Fulquet Nicolás, M., Duarte Gallego, V., Saurina Solé, A., Pou Potau, M. and Ramírez de Arellano Serna, M. (2018) Thermotherapy: Improving the vascular access cannulation procedure. The Journal of Vascular Access. November 16th. .

doi: 10.1177/1129729818809013.