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The Role of EPA Detection in the Management of Chronic Diabetic Wounds: Preliminary Study.

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Introduction: Proteases have various roles in wound healing such as the migration and activation of fibroblasts, extra cellular matrix remodelling and growth factor activation. However, in some non-healing chronic wounds, protease activity remains at an elevated level which impairs wound healing and can lead to chronic inflammation. The impact of elevated protease activity on wound healing is being discussed more frequently clinically and the need to control these proteases is being considered in the selection of treatment for chronic wounds. Chronic wounds with elevated protease activity (EPA) have a 90% probability they won't heal. But only 28% of non-healing wounds have EPA. **Aim of the study:** In a little cohort of patients with diabetic chronic lesions, we have investigate the protease activity level with a diagnostic tool . This test has guided us in the choice of the avanced dressing for each lesion. We have evaluated the evolution of the chronic wounds . **Methods:** We selected 20 diabetic chronic lesions classified with the Texas University classification. All the lesions was superficials, no-ischaeamic , with moderate infection. We randomized the lesions in 2 groups. The group A including the lesions with evaluation of the protease activity level with the protease test kit . We have treated the EPA-lesions with the collagen /ORC treatment (for the reduction of EPA) , the lesions with low level of protease activity with conventionally treatment for the "complex" diabetic ulcers. The group B including the lesions - Control treated with habitual pathway. In this study we used 2 outcome measures: healing (wounds that healing in 12 weeks) and improving (wounds that reduced in area by at least 50% in 12 weeks).**Results:** At the time of pubblication of this abstract, we have the results at 3 weeks of tratment. In the group A (n:6 patients), the EPA-lesions treated with avanced dressing for the reduction of this activity have a improvement of their clinical evolution in terms of size, cleaning and granulation, significantly more than the group B of control (n:8). **Conclusions:** This is preliminary results and showed the very important role of the MMP (Metalloproteases) activity in the clinical evolution of the chronic wounds. Early identification of potential healing complications using diagnostic tools is critical in facilitating the standardisation of treatment pathways and the cost effective allocation of limited resources.