

[P61] EXPRESSION OF DIFFERENT COLLAGEN TYPES IN DIABETIC FOOT ULCERS AND CHRONIC WOUNDS OF VARIOUS ETIOLOGY

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Aim: To evaluate the expression of collagen I, III and IV in diabetic foot ulcers of different etiology and non diabetic chronic wounds.

Materials: The 19 patients with nonhealing lower extremity chronic wounds were included. 6 samples were taken from diabetic foot ulcers (group 1), 9 patients had chronic diabetic foot postoperative wounds (group 2) and 4 samples were taken from chronic non diabetic ulcers (group 3).

Methods: Biopsies were performed from the margin and central part of the lesion. Immunohistochemistry was done with antibodies to collagen I, III and IV. Semiquantitative evaluation of immunohistochemical observation was made using score from 0 to 6.

Results: There was no difference in age and ulcer duration between groups. Collagen III expression showed significantly lower score in group 1 (0.33 vs 2.7 vs 3.0, $p=0.02$). Collagen I was the same in all groups (1.3 vs 1.8 vs 2.0, $p=0.50$). Collagen IV was significantly lower in group 1 compared with group 2 (0.7 vs 2.2, $p=0.44$) but did not differ from group 3 ($p=0.5$). Groups 2 and 3 did not differ on the content of collagen I, III and IV.

Conclusion: Our findings demonstrate that diabetic foot patients with ulcers of various etiology differed in connective tissue formation. Chronic postoperative diabetic foot ulcers and nonhealing nondiabetic ulcers showed significantly higher collagen III expression which normally appears earlier and replaced by collagen I. Non postoperative diabetic foot ulcers are characterized by low content not only collagen III but also collagen IV which is responsible for the normal formation of vessels basal membrane.