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Digital ulcers in scleroderma: staging, characteristics and sub-setting through observation of 1614 digital lesions.

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OBJECTIVES: To evaluate in Systemic sclerosis (SSc), the frequency of digital lesions and the morphology, characteristics, natural course and time to healing of 1614 digital ulcers (DU).

METHODS: 100 SSc patients were followed up for 4 years. In the first step, the digital lesions were observed and classified at the time of presentation (Digital pitting scar (DPS)[Fig.1]; Digital ulcer (DU) [Fig.2]; Calcinosis [Fig.3] ; Gangrene [Fig.4]). In the second step, DU were divided in subsets according to their origin and main features. In the third step, the time to healing was recorded for each DU and the influence of DU main characteristics on time to healing was also evaluated.

RESULTS: In the first step, 1614 digital lesions were observed: DPS - 712 lesions (44.1%), DU - 785 lesions (48.6%), Calcinosis 110 (6,8%) and Gangrene – 7 (0,8%). In the second step, DU were subsetted as follows: DU developed on DPS (8,8%), Pure DU ; DU developed on calcinosis,(60%). DU derived from gangrene. In the third step, the mean time to healing was 25.6±15.6 days in DPS, 76.2±64 days in pure DU, 93.6±59.2 days in calcinosis ulcers and 281.1±263.3 in gangrene.

CONCLUSION: in SSc, digital lesions are represented by DPS, DU, calcinosis and gangrene and provide an evidence based DU sub-setting according to their origin and main characteristics. Sub-setting may be helpful for a precise DU evaluation and staging, and in RCTs for a precise identification of those DU that are to be included in therapeutic studies.