Diabetic foot ulcers: aetiological factors, complication with osteitis, treatment and evolution according to anatomical location.

J.Viadé⁽¹⁾, L.García-Pascual⁽²⁾, M.Balsells⁽²⁾, MJ.Barahona⁽²⁾, T.Huguet ⁽¹⁾, Q.Jordano⁽³⁾, F.Girvent⁽⁴⁾, M.Muñiz⁽³⁾, J.Royo⁽⁵⁾, j C.del Pozo⁽²⁾, M.Buxeda⁽⁶⁾, JL.Dolz⁽⁷⁾, J.Anglada⁽²⁾. Diabetic Foot Unit ⁽¹⁾ of Endocrinology Service⁽²⁾, Internal Medecine⁽³⁾, Vascular Surgery⁽⁵⁾ and Radiology Service Hospital Mútua of Terrassa⁽⁷⁾. Traumatology Service of Hospital Parc Taulí of Sabadell⁽⁴⁾. Nuclear Medecine CTD ⁽⁶⁾.

Diabetic foot ulcers are considered a major health problem. Objective: to analyze the relation between aetiological factors, complications, treatment, cure rate, amputation, and anatomical location of diabetic foot ulcers. Patients and methods: we have included 203 diabetic patients attended at our multidisciplinary diabetic foot clinic (101 women, mean age: 61.5±23 y, duration of diabetes: 13.3±7.3 y) with 222 episodes of diabetic ulcer. Among aetiological factors, we have considered the presence of neuropathy when 2 or more of the tests performed (monofilament, pin-prick, 128 Hz tuning fork) were impaired; and ischemia when ankle-brachial index was <0.9. Osteitis was considered after suggestive imaging techniques or when probing was positive. Treatment consisted of pressure relief and curettage, if needed. An ulcer was considered healed when the duration was ≤ 3 months, and chronic if it persisted > 3 months. Results: the episodes of ulceration were located in toes (site A, 38.7%), submetatarsal (site B, 37.4%), external lateral foot area (C, 9.9%), plantar surface of the tarsus (D, 6.8%), heel (E, 3.6%), and dorsal foot (excluding toes) (F, 3.6%). Eighty-five% of patients had neuropathy or neuroischemia as the main determinant factor, and 15% had ischemia, which was more prevalent in site D (20%), E (25%) and F (37.5%), despite not statistical differences were found. Osteitis appeared more frequently in ulcers of site D (73.3%) and C (72.7%); however, in site E the prevalence was 0% (p<0.001). The treatment applied in all cases was pressure relief and topical therapy; and curettage was performed in 12.5% of ulcers of site E, and between 48.2 and 62.5% of the ulcers of the other sites, despite not statistical differences were found. Healing was obtained in 180 episodes (81%); the cure rate was high in all sites: 100% site E, 84% sites A and B, and 63-67% in the other sites. Amputation was performed in 12 episodes (5.4%), none of them in sites B and E. Conclusion: the main location of diabetic ulcers was toes and metatarsal heads (76%). Neuropathy alone or combined with ischaemia was the main determinant factor, with no relation to location. Osteitis was more prevalent in ulcers of sites D and C (>70%). Curettage was performed in almost half of episodes, leading to a high cure rate (81%) and low prevalence of amputation (5.4%).