Introduction: Necrotizing soft tissue infections are life-threatening infections that must be promptly treated. The treatment is based on combining surgical debridement, antibiotics and supportive care. Hyperbaric Oxygen Therapy (HBOT) is recommended as an adjuvant strategy, relying bacteriostatic and bactericidal effects and by optimizing tissue oxygen levels. Several studies report that applying HBOT in soft tissue necrotizing infections is related to improved survival and limb salvage. In this study, a review of 25 year experience of our center in treating necrotizing soft tissue infections with HBOT is performed.

Methodology: Retrospective and descriptive study. The clinical reports of patients diagnosed with necrotizing soft tissue infections treated with HBOT at our center were reviewed.

Results: A total of 65 patients (58 male and 7 female) with a mean age of 49 years were treated. Diabetes was the most common comorbidity condition (56.4%). Trauma was the most frequent etiology (30% of cases), followed by urological pathology. Most frequent anatomic location was perineum (53.8%) and lower limb (30.8%). Broad-spectrum antibiotics were used, namely metronidazole, clindamycin and meropenem, almost always in combination. Complications associated with HBOT were registered in 5 patients. Seven patients died (mortality rate: 15.6%), four of them had diabetes (57.1%). Surviving patients were submitted to an average of 20.8 sessions of HBOT, ranging from 6 to 100. The majority of patients were referred from hospital units in Lisbon area.

Conclusion: HBO is recommended as an adjuvant treatment in necrotizing soft tissue infections and should be considered whenever available. It was found that geographical area represents a limitation to referring these patients to our center. Due to the high level of care they require and logistical issues, it was clear that patients from outlying areas of Lisbon could not have access to the center without this interfering with other therapeutic strategies underway.