**PO27   FACTORS ASSOCIATED WITH MORTALITY AND LENGTH OF STAY IN A BURN CENTER**

Cristina Peixoto de Sousa(1); Gustavo Norte(1); Margarida Marques(2); Isabel Tourais(2)

(1) Centro Hospitalar de Trás-os-Montes e Alto Douro, EPE / Hospital de São Pedro (2) Centro Hospitalar e Universitário de Coimbra / Hospitais da Universidade de Coimbra

**Background and Goal of Study**:
Burns are associated with significant morbidity and mortality. Patients with severe burns sustain life-threatening injuries, requiring an intensive and long-term treatment. The main goals of this study are to describe the characteristics of the patients admitted to a Portuguese Burn Center (PBC) and identify the factors associated with increased mortality.
**Materials and Methods**
Medical records from patients admitted over a 5-year period, between January 2017 and December 2021, were retrospectively reviewed. Relevant data were assessed, including patient demographics, date of admission, burn etiology, circumstance of injury, extent of and anatomical areas burned, burn depth, presence of inhalatory injuries (II), mechanical ventilation (MV), and outcome. The data were analyzed using the Statistical Package for Social Sciences (SPSS) 28.0. A p value less than 0.05 was considered significant.
**Results**
During this period, 683 patients were admitted in this PBC. The male: female ratio was 1.4:1, with an average age of 61 years, a range of 18–99 years, and an ASA II score in 50.8% of the patients. The most common cause of burn was fire (52.0%). Regarding the circumstance of injury, most burns (81.3%) occurred at home. II were observed in 4% of the patients and 22.8% were placed on MV. The extent of burn quantified as percentage of total body surface area (%TBSA) is different (p<0.01) between the groups of etiology, being injuries caused by cutaneous hypersensitivity reactions the ones with higher %TBSA, with a mean of 36.2%. %TBSA was, also, higher in patients with II (38.6% vs 12.5%; p<0.01) and in patients placed on MV (24.7% vs 10.9%; p<0.01).
The overall mortality was 10.1% (69 patients) of total admissions. 62.3% of non-survivor patients were males, were significantly older (69 years vs 59 years; p<0.001) and had a higher %TBSA (37.3% vs 11.5%; p<0.001) than burn-surviving patients. A higher mortality rate was also observed in patients that presented full-thickness burns (14.3% vs 2.9%, p<0.001), suffered from II (30.4% vs 10.1%; p<0.001) and in patients that were placed on MV (28.2% vs 4.8%; p<0.001).
**Discussion and Conclusion**
This study provides important information about the characteristics of acute burns that occur in a PBC.Studying the epidemiology and outcomes of burns is essential for improving the level of care of burned patients. Age, %TBSA, burn depth, MV and II are the main factors that influence mortality.

**References**

Brusselaers N, Monstrey S, Vogelaers D, Hoste E, Blot S. Severe burn injury in Europe: a systematic review of the incidence, etiology, morbidity, and mortality. Crit Care 2010;14:R188.

Wasiak J, Spinks A, Ashby K, Clapperton A, Cleland H, Gabbe B. The epidemiology of burn injuries in an Australian setting (2000–2006). Burns 2009;35:1124–32.