THE ROLE OF RESPIRATORY THERAPY INTO THE TREATMENT OF SEVERE BURN PATIENT: A CASE REPORT (P108)

Arena D.1, *Depetris N.2, Fiorini A.1, Magi S.1, Morra A.1, Sarzi L.1

1 Città della Salute e della Scienza di Torino, Dipartimento di Ortopedia Traumatologica e Riabilitazione S.C. Medicina Riabilitativa Universitaria, Turin, Italy
2 Turin Burn Centre, Turin, Italy

Introduction: The Turin Burn Centre is the regional referral centre of Piedmont for adult patients with extensive burns, skin disorders, major wounds or other problems requiring similar treatment.

A multidisciplinary team, specialized in burn care, follows the care of the patients from time of injury to wound closure ensuring continuity of treatment.

The multidisciplinary team involves: plastic surgeons, intensivists, nurses and physiotherapists. One of the physiotherapists obtained a specialization in respiratory treatment following a specific one year master.

Severe burns mortality is highly correlated with acute respiratory distress syndrome.

Many factors lead to respiratory failure in burn patients.

Multidisciplinary interventions are fundamental for the prevention and treatment of respiratory failure in burn patients.

Case report:

- A 60-year old man was admitted to the Turin Burn Centre on the 03/08/2014 due to burn injuries. The patient was mildly obese with a past history of COPD. He had 30% of TBSA (15% III degree) due to fire. The burn lesions involved both lower limbs, right upper limb and face. Inhalation injury was suspected, but not confirmed by bronchoscopy.
- Debridement and skin graft were performed on the 07/08/2014 under general anesthesia.
- The patient developed dyspnea, hyperventilation and productive cough in the postoperative period. A FiO2 of 40% was needed to obtain SpO2 of 90%.
- A chest x-ray taken on 13/08/2014 showed bilateral pleural effusions and bilateral infiltrates.
- The multidisciplinary team planned interventions for preventing further exacerbation of the respiratory failure and to restore respiratory capacity, avoiding endotracheal intubation.
  - Plastic surgeons prescribed wound treatment
  - Intensivists prescribed non invasive ventilation with the use of a total face mask
  - Physiotherapists promoted positioning, active exercises of upper limbs and early mobilization out of bed
  - Respiratory physiotherapist promoted active and passive breathing exercises and expectoration to facilitate clearing of secretions
  - Nurses continued the prescribed treatments 24 hours a day.
- Three weeks later the patient was retourned to normal respiratory function and able to walk without O2 therapy.
The chest x-ray taken on 17/09/2014 showed minimal pleural effusions and the resolution of the bilateral infiltrates.

Conclusions:

- Prevention and treatment of respiratory failure in burn patients could play a major role in reducing burn mortality and morbidity.
- Respiratory therapy is fundamental to prevent and treat respiratory failure in burn patients.
- The treatment plan should be agreed and carried out by all members of the multidisciplinary team.
- The experience and knowledge acquired following specific training courses (i.e. master in respiratory physiotherapy) is essential for assuring an effective treatment plan.