TEN YEAR EPIDEMIOLOGY AND COST ANALYSIS OF PAEDIATRIC BURNS UNDERGOING FLUID RESUSCITATION AND TREATMENT AT THE WELSH CENTRE FOR BURNS AND PLASTIC SURGERY (197)

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Introduction: Globally, burns injuries are the third leading cause of unintentional death amongst children (¹). Special considerations need to be made when managing paediatric burns, especially those requiring resuscitation and operative intervention. Burn injuries within the paediatric age group can result in significant morbidity and mortality. This study evaluates the ten year Welsh experience of the epidemiology and cost of paediatric burns that required fluid resuscitation.

Methods: The study was conducted at the Welsh Centre for Burns and Plastic Surgery (WCBPS) Swansea, United Kingdom. The WCBPS is a designated adult burn centre providing a network of care across West, Central and South Wales and South West England and also provided care for paediatric patients requiring intensive care support till 2010 from which point onwards the patients with extensive paediatric burn injuries were transferred to South West UK Paediatric burn centre at Bristol for further care. The data of all paediatric (age

Results: A total of 3870 patients underwent assessment, of which 32 % were acute injury admissions (n=1250), of which 2% (n=82) required resuscitation. A minimum of 3 and a maximum of 17 patients underwent resuscitation each year between 2003-2013, 39% were male (n=32) and 61% female (n=50). The mean age was 5.3 years (minimum age of 10 months, maximum of 15 years). A total of 49% (n=40) sustained partial thickness burns, 5% (n=4) full thickness and 46% (n=38) sustained mixed thickness burns. The average TBSA % burn was 20% (minimum 8% TBSA, maximum of 70% TBSA). The majority of patients sustained scald injuries (56%, n=46), followed by flame burn injuries (31%, n=25). Other mechanisms of injury include contact (6%, n=5), sunburn (5%, n=4) and flash injuries (2%, n=2). Average length of ventilation was 1.5 days (range 1-24 days) and average length of stay (LOS) in ICU was 6.4 days (range 1- 42 days). The total LOS averaged 17 days (range 1- 85 days). The average cost of ICU stay was £20,000 (£3,131/day). There was a downward trend in regards to patients requiring burn surgery.

Conclusion: The cost of treatment of burns remains high. There has been a steady decline in paediatric burn injuries requiring resuscitation and operative management in our unit. This could be attributed possibly to the prevention of burn injuries by improved awareness, fire prevention & safety initiatives. In addition, this data provides a valuable resource for developing health initiatives targeted at the public for further reducing the incidence of paediatric burns.

Reference: