Review of TBSA estimation accuracy over the past three decades in NSW

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Accurate assessment of total body surface area (TBSA) percentage of a burn injury is critical for optimal management and appropriate transfer of burn patients. In an earlier publication from this unit data in the state of New South Wales (NSW), Australia from 1989-1990 was compared to that of 2000-2001 showing poor estimation of TBSA percentage. This study aims to assess if any progress has been made in accuracy of TBSA estimations in NSW.

A review of 703 adults transferred to Burn Units in NSW between January 2009 and August 2013 was performed. TBSA estimated by the referring institution was compared with the TBSA measured at the Burns Unit and difference of within 10% deemed as accurate (same criteria as used in our earlier publication). Data then compared to that from the two earlier time frames of 1989-1990 and 2000-2001.

Accurate TBSA estimation occurred in 39%, 42% and 37% of transferred patients respectively in 1989-1990 and 2000-2001 and 2009-2013 years respectively. Overestimation to underestimation occurred at a ratio of 0.35:1, 1.36:1 and 3.6:1 respectively. Percentage of inaccuracy in the overestimated group had a mean of 260%, 80% and 184% and in the underestimated group 36%, 36% and 29% respectively.

Despite the introduction of NSW 'burn transfer guideline' rate of accurate TBSA assessments have not improved over the past three decades. Overestimation of burn size has been becoming more frequent over this time and this may lead to over resuscitation with fluids and inappropriate transfers to the burns unit. Ongoing education and training is required to improve the accuracy of TBSA estimation for optimal patient outcome.

Key Words

TBSA, Adult burns

Nominated Stream for Oral Presentations

[x] Medical
[ ] Nursing
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[x] Care
[ ] Prevention
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