



Care of the Teenage Burn: Tips and Tricks

IM Salna¹, R Schrale¹, A Castley
¹Royal Hobart Hospital



Background: Despite numerous prevention efforts, burn injuries still remain a significant health concern for children and adolescents. Recently it has been estimated that 664 people aged 10-19 years of age present for care of their burn injury in Victoria alone¹. There are however, special considerations when managing a burn injury in a teenager, an almost adult in some ways.



Aim: To identify common pitfalls in the treatment of teenage burn injuries and discuss solutions.

Methods: A case report of a teenager with a burn injury at the Royal Hobart Hospital (RHH) will be presented. There will be a discussion around the difficulties faced in their care, from admission to discharge and how these were overcome.

Results: A teenager sustained a significant flame burn to their body when an accelerant was used on an open fire at a party and clothing caught alight. This burn injury required significant inpatient care and multiple operations under general anaesthesia. Like most burns patients, management required a multi-disciplinary input from burns, paediatrics, acute pain services, physiotherapy, dietetics, grief counselling, occupational therapy, social work, play therapist and psychology.

Special considerations in this particular case are summarised in the table below.

Aspect of Care	Issue	Solution
Admission	-care of an adolescent	-shared care with paediatric team
Resuscitation	-fluid resuscitation	-due to weight, resuscitated as an adult (Parkland's formula)
Consent	-consent for medical procedures by a minor	-assessed as having capacity to consent for herself
Psychological	-undiagnosed anxiety/behaviour disorder	-psychology (use of the Child & Mental Health Service) -grief counselling -follow-up in the community
Health Behaviour	-poor engagement & participation	-psychology, grief counselling
Pain	-subjective low pain threshold	-acute pain services (APS) -agents including pregabalin titrated to 25mg TDS on discharge

Discussion: Teenagers may not be the most common age group to present with a burn injury. However, they have complex and special needs specific to their age group. Firstly, they have risky behaviours when it comes to fire safety and developmental risk factors such as increased independence & decreased parental supervision². Education needs to target these areas for prevention activities. In many ways teenagers can be treated as adults (i.e. initial fluid resuscitation should depend on body weight and pain requires APS input).

In other ways they need to be treated differently. A child 16 years and over can consent to their own medical treatment as validly as they are an adult, however they may be younger depending on the level of maturity and the nature and complexity of the medical treatment³. The treating surgeon should be aware of the increasing incidence of behavioural and mood disorders in teenagers, that may affect pain perception, as well as rehabilitation and participation in burn injury patients². There is a need for better education in teenagers who are at risk of sustaining burn injuries. There is a need for better education for medical personnel and allied health managing burn injuries in the teenager.

Conclusion: Increased recognition of issues unique to teenage burn injuries may improve management. There may be a role for an adolescent burn unit, but most teenagers (>16 years) can be treated in an adult burns unit such as at the RHH, with access to the usual multidisciplinary teams, as well as paediatric services.

References

- 1 Wasiak J, Spinks A, Ashby K, Clapperton A, Cleland H and Gabbe B (2009). The epidemiology of burn injuries in an Australian setting, 2000-2006. *Burns*:35;1124-1132.
- 2 Mentrikoski JM, Duncan CL, Enlow PT, Aballay AM (2019). Predicting adolescents' intentions to engage in fire risk behaviours: an application of the theory of planned behaviour. *Burns*: article in press.
- 3 Choahan N (2018). Children and consent for medical treatment. Available online at: <https://www1.racgp.org.au/newsgp/professional/what-is-too-young-children-and-consent-for-medical>.