Case Review: The use of Telehealth Services for Specialist Facial Burn

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Background:

The management of specialist burns in rural areas to meet best practice guidelines and minimise contracture development can be challenging. Telehealth services can provide a way to service this population as reviewed in the case of a man with a full thickness, low voltage electrical lip burn. Telehealth services were important in providing a multidisciplinary service and contributing to positive outcomes for this patient who required specialist burns input.

Case Description:

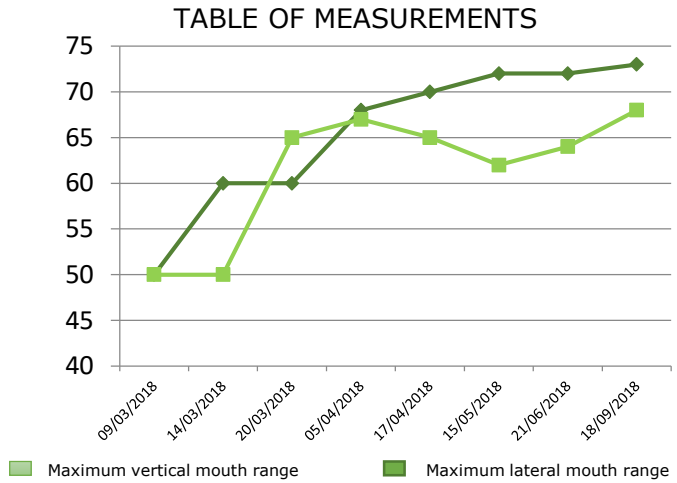
A 21 year old man presented to his local community hospital with a full thickness electrical burn to his lower lip. The patient reported he reached out for his bedside lamp with his right hand to pull it closer to him. He felt a shock and was thrown backwards. The patient sustained a head strike with no loss of consciousness. There were thoughts that he may have bitten the cord of the lamp under the influence of drugs. He had difficulty recalling the time frame of events. He reported not to have slept the previous night and acknowledged having smoked methamphetamine that morning. There was no significant medical history and the patient was living at home with his mother and youngest brother at the time. He was a recreational drug user with a history of daily cannabis use and 3-4 cigarettes.

Management in the emergency department included: first aid, cardiac monitoring for 4 hours and liaison with the Tasmanian Burns Unit. Photographs were taken of the burn (Image 1). It measured 1cm in diameter and was considered consistent with an exit wound from a low voltage electrical burn. The patient attended one initial assessment and planning session in the Tasmanian Burns Clinic with weekly outpatient follow up that progressed to monthly over a 6 month period through the telehealth Burns Clinic. This included an occupational therapist onsite with telehealth support from the Tasmanian Burns Unit multidisciplinary team, including: plastic surgeon, clinical nurse consultant, and speech pathologist.

Education was provided on nutritional requirements and the client was commenced on a multivitamin. Smoking cessation was completed with ongoing education provided on the increased risks of smoking on wound healing. Wound care included the use of lanolin and sun protection. Passive and active mouth stretching and massage were commenced five times daily from the initial assessment to manage scaring and contractures. Participation in normal activities were encouraged for functional movement. For example, the patient was recommended to eat food requiring increased mouth movement and to progress from using a straw to a cup. He attended the majority of scheduled sessions, however his participation in exercises at home waned over the last 3 months. On attendance at sessions, measurements of vertical and lateral maximum range were taken.

Results:

The patient showed positive functional and objective improvements. The graph below demonstrates the overall improvement in maximum vertical and lateral measurements of mouth range. The patient reported that he returned to eating and drinking his regular diet and fluids at 5 weeks post injury. At 6 months the scar was slightly firm with some sensitivity. He continued to smoke.



Discussion:

Telehealth is the delivery of health services through a variety of telecommunication tools (Dorsey & Topol 2016) to improve access to health care services outside of the traditional face to face interaction (Tenforde et al. 2017). Burn victims are best cared for in specialised burn centres with experienced multidisciplinary health professionals providing a holistic patient centred approach (Butler, 2013). Telehealth is seen as a feasible option for burn care (Wallace et al. 2012; Turk et al. 2011) and telehealth can offer significant benefits for those in rural areas where access and costs can be challenging (Turk et al. 2011). In the case presented, a telehealth service was of considerable benefit as it provided access to a specialist service that would have otherwise been difficult to access regularly due to lengthy driving time and costs associated with travel. It allowed ongoing specialist input to be provided that resulted in positive outcomes for the patient.

Conclusion:

Telehealth services were important in contributing to positive outcomes for a rural patient requiring specialist burns input. The patient will continue to require ongoing follow up for scar management with the Tasmanian Burns Unit multidisciplinary team, including the local occupational therapist, through the utilisation of the state Burns Unit telehealth service.

References:

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