An Evaluation of Patients that Failed Outpatient Management but Rescued by the Use of Synthetic Lactic Acid Polymer

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Introduction: We implemented and participate in telemedicine for outpatient referrals from outlying and surrounding hospitals. Outside hospitals will submit photos and provide basic information about the burn injury. A staff physician then triages the pic and suggests inpatient vs outpatient management. Quality review of this process identified 5 patients that on presentation to clinic were admitted secondary to uncontrolled pain. The charts were assessed for areas of complaint, narcotic needs, previous dressings used and what treatments were implemented post intervention.

Methods: Patients were identified during a quality review for admissions on first presentation to clinic. These assessments are evaluated for assurance that things aren’t missed or overlooked in our telemedicine program. When looking at this data we noted that of the 3 patients had polylactic acid synthetic polymer skin substitute applied. Once identified the charts were retrospectively reviewed for treatment course post admission. Key items identified was percent and depth of burn, narcotic usage on arrival to clinic and post procedure narcotic usage, time to discharge post intervention, standard pictures were reviewed.

Results: Review of the charts yielded the following: Pt# 1 was a 16 year old female that sustained 7% TBSA 2nd degree burn to the lower extremity. She presented in a wheelchair taking oral narcotics at home q4h and undergoing silver sulfadiazine (SSD) twice daily. Taken to the OR 2 hrs post admission and placed in polylactic acid polymer. Her narcotic need decreased to 4 pills on POD#0 and was discharged home POD#1. Pt #2 was a 70 year old male who had polylactic acid skin substitute applied to the left leg and silicone backed foam dressings applied to the right. The patient represented 2 days later with uncontrolled pain in the right leg. He remained in the hospital for 3 additional days with only a complaint on the right. This situation led to a great controlled evaluation of pain perception as his treatments were different Pt# 3 was admitted with 20% TBSA 2nd degree scald burns. Wounds initially dressed in antibiotic ointment and gauze. He was placed in polylactic acid to minimize wound care. But it was noted that he received no narcotic medications in his 24 hours post operative period and was slated for discharge on POD #2.

Conclusions: With such drastic changes in narcotic need, physical activity and ability to discharge home, this warrants a continued look at the ability of the polylactic acid synthetic polymer skin substitute to minimize pain and why. We plan to next evaluate if pain is decreased or minimized in the most painful wounds of all, donor sites.

Applicability of Research to Practice: May decrease narcotic need through minimally invasive interventions.