Small Pediatric Burns Can Be Safely Managed on an Outpatient Basis

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Introduction

- Each year in the United States, approximately 120,000 pediatric patients present to emergency rooms with burn injuries.
- Outpatient management of pediatric burns is advantageous as it leads to improved patient experiences and reduced healthcare costs.
- Our institution often treats small (<10% TBSA) burns in pediatric patients in an outpatient setting with a non-daily dressing.

Objective

The aim of this study was to determine if small pediatric burns can be effectively treated on an outpatient basis with a non-daily dressing and to assess the risk factors for failure.

Methods

- A retrospective chart review conducted from July 2016 to July 2019 at a single ABA-verified burn center.
- All patients under 18 years of age presenting to the 24-hour burn evaluation clinic were included.
- Post burn day, age, sex, TBSA, burn etiology, body area burned, burn dressing type, outpatient versus inpatient management, reason(s) for admission and operative intervention were recorded.

Results

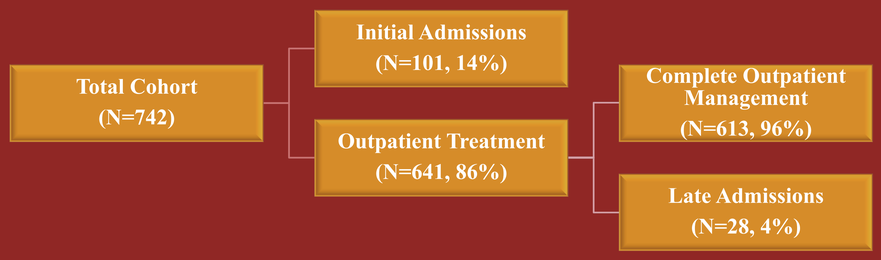

Figure 1: Flow diagram of patient disposition.

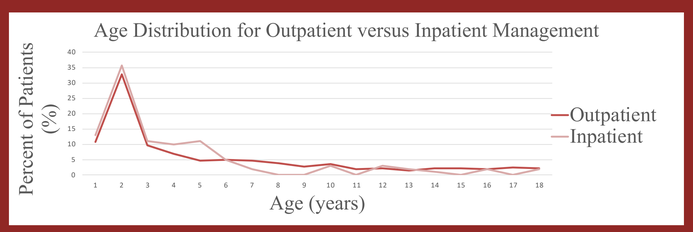

Figure 2: Age distribution for inpatient versus outpatient management.

- There was a significant difference in age between patients admitted to the burn unit and those treated outpatient. Age showed a similar distribution between the two groups (Figure 2).
- The most common reasons for admission following outpatient care were nutrition optimization (61%) and surgical intervention (46%).

Table 1: Patient demographics, injuries, and outcomes.

	Cohort (N=742)	Initial Admissions (N=101)	Outpatient Treatment (N=641)	P-value (inpatient vs. outpatient)	Outpatient Only (N=613)	Late Admissions (N=28)	P-value (outpatient only vs. late admission)
Age y, mean (SD)	4 (5)	3 (4)	4 (5)	0.02*	4 (5)	4 (5)	0.6
Gender M, N (%)	391 (53)	50 (50)	341 (53)	0.1	326 (53)	15 (54)	0.1
TBSA %, mean (SD)	3 (4)	9 (6)	3 (2)	<0.001*	3 (2)	4 (3)	0.001*
Mechanism N (%)				0.06			0.8
Scald	504 (68)	73 (72)	431 (67)		411 (67)	20 (71)	
Contact	146 (20)	11 (11)	135 (21)		131 (21)	4 (14)	
Flame	37 (5)	8 (8)	29 (5)		27 (4)	2 (7)	
Other	55 (7)	9 (9)	46 (7)		44 (7)	2 (7)	

Table 2: Dressing type used versus patient outcomes.

Dressing Type N (%)	Cohort (N=742)	Initial Admissions (N=101)	Outpatient Treatment (N=641)	P-value (inpatient vs. outpatient)	Outpatient Only (N=613)	Late Admissions (N=28)	P-value (outpatient only vs. late admission)
Silver Foam Dressings	525 (71)	48 (48)	477 (74)	<0.001*	456 (74)	21 (75)	0.9
Other	217 (29)	53 (52)	164 (26)		157 (26)	7 (25)	

Conclusion

- The vast majority (83%) of small pediatric burns can be treated on an outpatient basis with a non-daily dressing with good results.
- When burns are larger in size (>4% TBSA), there is a potential increased risk for subsequent admission following outpatient care.
- Most subsequent admissions following initial outpatient care are due to poor PO intake at home. Nutrition optimization requires close monitoring and family education.

Applicability to Practice

Pediatric patients with small burns can be safely managed in an outpatient setting with a non-daily dressing. Those patients who fail outpatient care will likely fail from poor PO intake at home. Screening tools need to be developed to predict which pediatric patients will fail outpatient management.

References

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