



Demographic and clinical predictors of suspected abuse in genital burn injuries: a national database study

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Background

Genital burn injuries are rare and may raise concern for abuse, particularly when occurring in isolation.¹⁻³ Early identification is crucial, as these patients often require multidisciplinary care and careful discharge planning.

Aims

identify demographic and clinical predictors of suspected abuse in genital burn injuries using data from a national burn registry, with the goal of improving timely recognition and care for at-risk individuals.

Methods



Inclusion criteria



Data collection



Analysis

- Burn Care Quality Platform (BCQP)
- Genital burns from 2013 to 2022
- Demographics
- Injury characteristics
- Treatments/operations
- Complications
- Descriptive and comparative statistics
- Logistic regression to identify potential risk factors for suspected abuse in patients with genital burns

Results

Table 1. Risk factors for suspected abuse victims. OR, odds ratio; CI, confidence interval; TBSA, total body surface area.

Risk factor	OR	95% CI	p-value
Age (per year increase)	0.927	0.894-0.961	<0.001
Female sex	1.15	0.772-1.71	0.497
Race (versus White)			
Black	2.10	1.35-3.27	0.001
Asian	0.355	0.082-1.54	0.166
Multiple Race	0.585	0.191-1.90	0.347
Other	1.52	0.828-2.80	0.176
Major psychiatric illness	0.339	0.084-1371	0.129
Mental/personality disorder	11.03	2.97-40.94	<0.001
Dementia	7.18	1.19-43.18	0.031
Alcohol dependence	1.978	0.521-7.52	0.316
Substance use disorder	0.233	0.024-2.29	0.211
Marital status (versus single)			
Domestic partnership	1.64	0.161-16.64	0.677
Married	0.191	0.039-0.940	0.042
Separated	4.93	0.557-43.61	0.152
Widowed	14.47	2.64-79.32	0.002
Living With (versus alone)			
Other	3.69	0.379-35.94	0.260
Other Family Member	2.38	0.366-15.47	0.364
Parents	0.473	0.100-2,23	0.344
Spouse/Partner	0.047	0.0004-0.626	0.021
Living Situation (versus house/apartment)			
Adult group home	51.29	6.25-421.07	<0.001
Homeless	62.48	15.11-258.43	<0.001
Other	3.65	0.292-45.68	0.315
Skilled nursing facility	285.91	11.36-7198.82	0.001
Burn Etiology (versus scald)			
Chemical/Corrosion	2.135	0.637-7.16	0.219
Contact	6.57	1.39-31.09	0.018
Flame	0.328	0.071-1.52	0.155

Risk factor	OR	95% CI	p-value
Place of Occurrence (versus private residence)			
Industrial/construction	0.668	0.119-3.739	0.646
Institutional residence	0.491	0.054-4.42	0.526
Other places	0.266	0.085-0.833	0.023
Paved roadway	0.101	0.015-0.695	0.020
Trade/service area	0.139	0.018-1.10	0.061
Third degree genitalia burn	0.970	0.446-2.11	0.940
TBSA (per 1% increase)	1.05	1.03-1.07	<0.001

Table 2. Clinical Course and Outcomes. N, number; SD, standard deviation; ICU, intensive care unit.

Variable	Abuse N (%)	Non- Abuse N (%)	p-value
Time from injury to admission (days), mean ± SD	1.3 ± 3.9	1.4 ± 7.0	0.800
Total length of stay (days), mean ± SD	14.5 ± 20.1	16.7 ± 32.3	0.280
Length of stay in ICU (days), mean ± SD	11.8 ± 18.4	18.2 ± 33.0	0.025
Discharge disposition			<0.001
Deceased/Expired	17 (6.7)	590 (16.6)	
Home Under Care of Home Health	11 (4.3)	208 (5.8)	
Service			
Home or Self-Care (Routine Discharge)	159 (62.4)	2155 (60.5)	
Hospice Care	1 (0.4)	20 (0.6)	
Left Against Medical Advice	0 (0.0)	33 (0.9)	
Other Home or Custodial Living	31 (12.2)	35 (1.0)	
Situation			
Transferred as an Inpatient to Another Hospital	12 (4.7)	78 (2.2)	
Transferred to Other Type of Facility or Designated Unit	24 (9.4)	442 (12.4)	
Number of operations, mean ± SD	1.1 ± 1.7	1.2 ± 2.6	0.578

Discussion

Younger age, Black race, and certain living situations (e.g., homelessness, skilled nursing facilities) were strongly associated with suspected abuse in genital burn cases.

Abuse-related burns were more likely to be scalds with lower TBSA, often occurring in private residences.

Interestingly, abuse victims in this cohort had shorter ICU stays and lower mortality, possibly due to a higher prevalence of isolated injuries.

Conclusions

Demographic and clinical factors can aid in the early identification of suspected abuse in patients with genital burns. Recognizing these patterns may help clinicians intervene earlier and coordinate appropriate multidisciplinary support and safe discharge planning.

References

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