

706 Epidemiology, Therapeutic Complexity and Prognostic Challenges of Burns to the Perineum, Buttocks and Genitals

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Introduction: Burns that involve the perineum, buttocks and genitals (PBG) have been associated independently with more challenging therapeutic needs and worse clinical outcomes in case series and smaller patient collectives, while large scale epidemiology of this injury is lacking. We studied a cohort of 1024 patients admitted to our burn center to assess clinical outcomes based on the presence of PBG burns.

Methods: Medical records were screened for patients who did or did not sustain PBG burns and patients stratified accordingly (PBG vs. control (CTR)). Demographic baseline data, burn etiology, presence of inhalation injury (IHT), presence of full thickness burns (FT), number of operations (NOR), mortality, length of ICU treatment (LOS ICU) and hospitalization (LOS) were assessed to compare clinical characteristics and outcomes between the groups. Multivariate regression analyses adjusting for TBSA, sex and age were conducted for key clinical outcomes.

Results: Between 2014 and 2022, 1024 patients were included in the analysis (PBG: n=227; CTR: n=797). PBG burns were older (median (IQR) 54 (38) vs. 44, (31) years, $p < 0.0001$), more frequently female (35% vs. 23%, $p=0.002$) presented with larger TBSA burns overall (27 (37) vs. 10 (13) %, $p < 0.0001$) and sustained FT burns more frequently (69% vs. 26% $p < 0.0001$). Scald burns were more frequently the cause of PBG burns (45% vs. 15%, $p < 0.0001$), PBG patients needed twice as many surgical procedures (2 (4) vs. 1 (1), $p < 0.0001$) as CTR. PBG patients remained longer in the ICU per percent TBSA (0.9 (1.1) vs. 0.5 (0.8) days/%TBSA, $p < 0.001$). Mortality was higher in patients with PBG burns (33.1% vs. 7.8%, $p < 0.0001$). Multivariate logistic regression yielded significant effects of PBG burns on LOS ICU, LOS and NOR.

Conclusions: Burns to the perineum, buttocks and genitals are associated with more challenging baseline characteristics upon admission and substantially worse clinical outcomes than burns not involving PBG.

Applicability of Research to Practice: Expectable therapeutic challenges regarding prolonged intensive care, more frequent surgeries and increased risk for mortality should be taken into account and planned for when admitting patients with PBG burns.

TABLE 2: OUTCOMES

	Heparin n = 3,357 (34%)	LMWH n = 6,500 (66%)	p-value
Clinical Outcomes			
Hospital Length of Stay*	9 (4-17)	8 (4-16)	0.104
ICU Length of Stay*	6 (3-16)	5 (3-11)	<0.001
Mortality	159 (4.7)	191 (2.9)	<0.001
Complications			
Deep Venous Thrombosis	40 (1.2)	60 (0.9)	0.208
Pulmonary Embolism	21 (0.6)	9 (0.1)	<0.001
Venous Thromboembolism	53 (1.6)	67 (1.0)	0.019
Bleeding Complications	253 (7.5)	388 (6.0)	0.003

*Reported as median (interquartile range)