

Pediatric Hangings and Strangulation: Clinical Patterns and Associated Outcomes

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Introduction

Hangings and strangulation in the pediatric population have a potential for severe morbidity or mortality. We present a large cohort of pediatric patients evaluated for hanging-type injuries, focusing on initial presentation and outcome, to determine if any aspects of clinical presentation correlate with outcome.

Table 1. Patient demog	raphies (n=s4)		
Age (years)	9.9		
Male rec(%)	\$466A.2		
Patients with a Prior Pa	ychistric Diagnosis (%)	00 (47.6	
Etials by of Injury (%)			
Acc de	9 (10.7)		
Ace dental ligature in infant/to deller		19 (22.6	
Voluntary lighture without suit onlinifont. Voluntary lighture with suit dell intent		43 (51.2	
Median Admission GCS	1.0		
Arterial Blood Gas Med		7.245	
Autorial Bland Gas Medien p.002		42	
Profungital Codias Greet (9)		21.(25)	
Prelinquital CPR Perform	me:4(%)	21 (23)	
Into bated (%)		19 (45.0	
	ric Interches Care Unit (%)	63 (51.7	
Associated Complication			
Cervical fracture or dislocation			
Spizone		17420.2	
Pulmonery Edam a		16 (19.0	
Prieomonia		8 (9.5)	
Acute Respiratory Distress Syndrome		4(4.8)	
	rgan Raillurg	10(01.5	
	omnance Category Seal o (%)		
\$5000	Catagory		
1	Nama	17(67.5	
12	nti di Ji sability	F(7.1)	
*	Atoderate Dissolity		
4	VENERA DISSIDINA	243-30	
	Como	1 (2-2)	
- 6	Broin Death/Death	19 (22.6	
Disposition (%)			
I Horie		42 (50)	
2 Impations Renabilisation Facility			
3 Skilled Nursing Facility			
4 Inpacient Psychiatric Facility		23 (27,4	
5 Derth		19 (22.6	

Methods

We reviewed medical records from 1992 - 2015. Data from children with hanging injuries were examined. Outcome was measured using Pediatric Cerebral Performance Category (PCPC). For categorical variables, p-values were from fisher exact test, and for continuous variables, p-values were from non-parametric Wilcoxon test. Statistical significance was defined as P < 0.05.

Results

We identified 84 patients. Median age was 12, and 56% were male. Of the total injuries, 51 were intentional, and the remaining were accidental or of unknown intent. At the time of discharge, 19 patients died, 1 was comatose, 1 had severe disability, 6 had mild disability, and 57 were neurologically intact. All patients with mild or no disability (PCPC<3) were either discharged home or to a psychiatric facility. Poor prognosis was associated with: lower GCS, intubation, a lower initial pH on arterial blood gas (ABG), presentation with a cardiac arrhythmia, and anoxic brain injury noted on imaging. The single comatose patient, and all patients who ultimately died, presented with a specific combination of findings: history of cardiac arrest requiring prehospital CPR and an initial GCS of 3. No other patients had this particular combination of findings.

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Conclusions

Pediatric patients with hanging-type injuries often have a wide variety of presentations. While prognosis correlated with several findings, persistent vegetative state or mortality were firmly associated with history of cardiac arrest requiring prehospital CPR and an initial GCS of 3.

Learning Objectives

By the conclusion of this session, participants should be able to: 1)
Describe the relevance of studying pediatric hanging-type injuries 2)
Discuss, in small groups, how to evaluate these patients 3) Identify clinical findings that will be most helpful in predicting outcome.