




ARRÊTS CARDIAQUES TRAUMATIQUES

Description des résultats

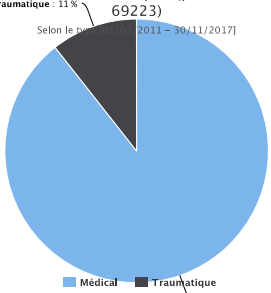
P. Eyral
30/11/2017

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Introduction



Répartition des arrêts cardiaques [patient réanimé] (N = 69223)
Selon le type d'arrêt : 2011 - 30/11/2017



Type d'arrêt	Pourcentage
Médical	89%
Traumatique	11%

REAC

Introduction

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PREHOSPITAL TRAUMATIC CARDIAC ARREST: THE COST OF FUTILITY

Alexander S. Rosemurgy, MD, P. A. Norris, MSN, S. M. Olson, RN, J. M. Hurst, MD, and M. H. Albrink, MD

Of 12,462 trauma patients cared for by prehospital services from October 1, 1989 to March 31, 1991, 138 patients underwent CPR at the scene or during transport. Because of the absence of blood pressure, pulse, and respiration, twenty-six (70%) suffered blunt trauma, 42 (30%) suffered penetrating trauma. Only 16 (12%) were transported by air utilizing county-wide transport protocols. None of the patients survived. Aggregate care cost \$871,188.00, or 11 cases (\$5,195). Reason for transportation was provided (only comes). Conclusion: Trauma patients who require CPR at the scene or in transport die. Inherent organ procurement does not seem to justify the cost primarily borne by hospitals. Consumption of resources and exposure of health care providers to occupational health hazards. The wisdom of transporting trauma victims suffering cardiopulmonary arrest at the scene or during transport must be questioned. Allocation of resources to these patients is not an insular medical issue, but a broad concern for our society, and society should decide if the "cost of futility" is excessive.

Zwingmann et al. Critical Care 2012, 16:R117
http://ccforum.com/content/16/R117



RESEARCH

Open Access

Survival and neurologic outcome after traumatic out-of-hospital cardiopulmonary arrest in a pediatric and adult population: a systematic review

Jörn Zwingmann¹, Alexander T. Mehlhorn, Thorsten Hammer, Jörg Bayer, Norbert P. Südkamp and Peter C. Stohr²

aged ≤ 8 years. The overall mortality was 92.8%. The mixed population of 5,391 patients had 238 survivors and therefore a mortality of 96.7%. In the solely pediatric

Introduction

Outcome in 757 severely injured patients with traumatic cardiorespiratory arrest¹²

Stefan Huber-Wagner^{a,*}, Rolf Lefering^b, Mike Quicke^a, Michael V. Kay^a, Thomas Paffrath^b, Wolf Mutschler^a, Karl-Georg Kanz^a,

In the worst case scenario of no blood pressure, no pulse, no breathing rate and GCS of 3 points on-scene the survival rate was 7.7% (95% CI 2.6–12.8, n = 104).

Traumatic Cardiac Arrest: Who Are the Survivors?

David Lockey, FRCA, FIMC, RCS(Ed)

From the London Helicopter Emergency Medical Service, Royal London Hospital, London, United Kingdom.

Kate Crewdson, MB, BS, BSc
Gareth Davies, FFAEM, FRCP

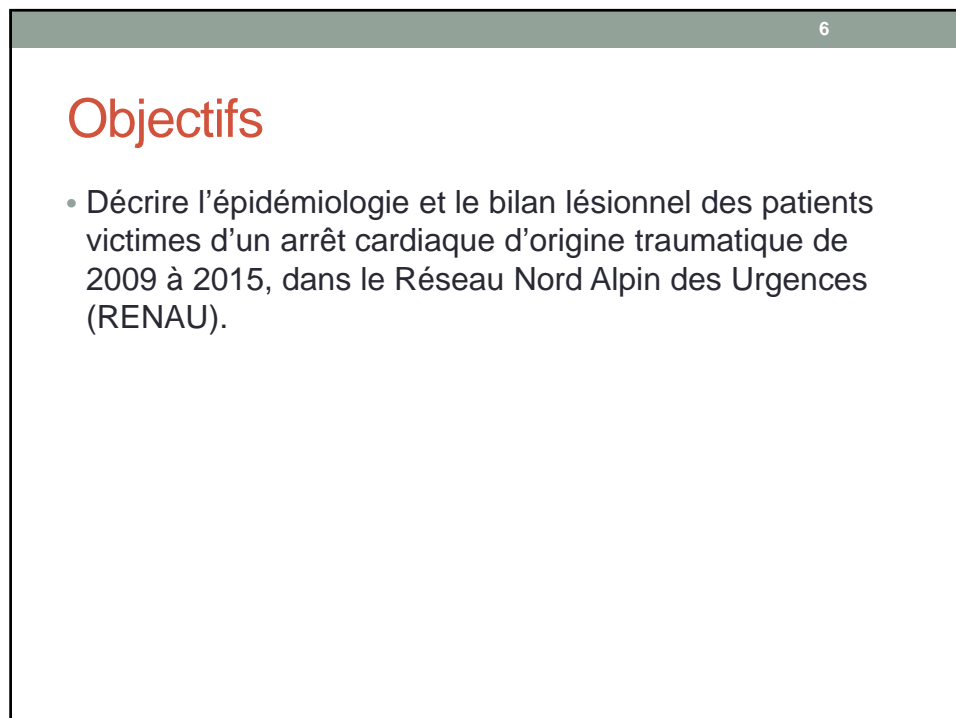
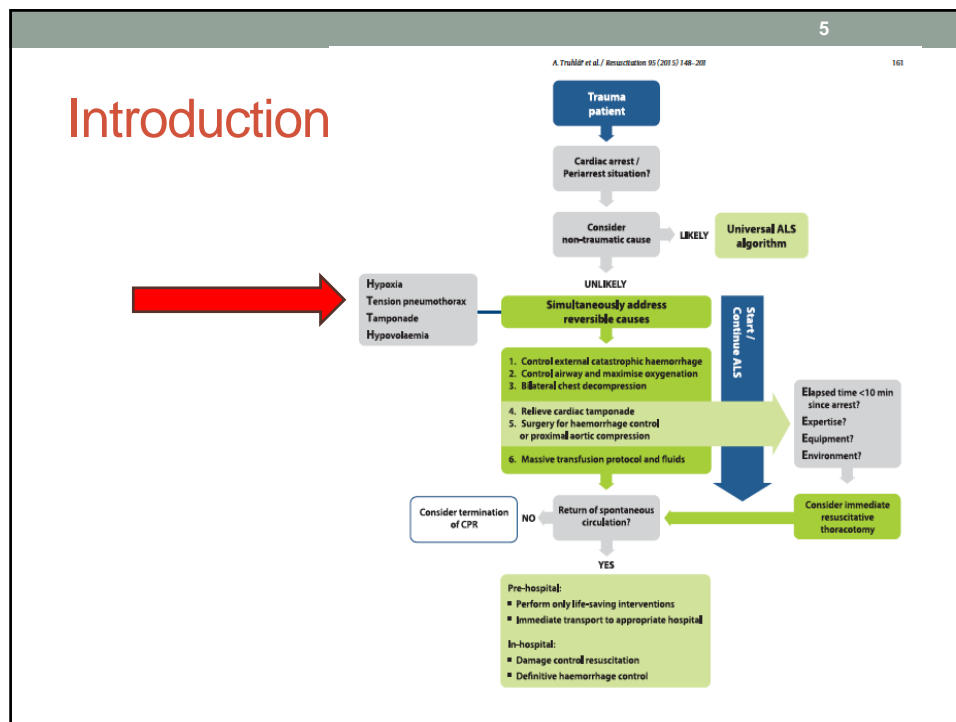
department (ED). One hundred thirty-one patients (14.4% [95% CI 12.1% to 16.7%]) survived to discharge from the ED, and of these, 68 patients (7.5% [95% CI 5.8% to 9.2%]) survived to hospital discharge. The outcome could not be

ORIGINAL ARTICLE

Traumatic cardiac arrest: Should advanced life support be initiated?

Carmen Camacho Lelis, MD, Conrado Camacho Hernández, MD, Ma José García-Ochoa Blancas, MD, and Paloma Cevallos Rey Paterna, RN, Ramón de Elías Hernández, MD, and Ezequiel Carral Torres, MD, Madrid, Spain

difference in age between sexes. The survival rate by age groups was 23.1% in children (0–16 years), 5.7% in adults (17–64 years), and 3.7% in the elderly (>65 years) with statistical significance. There were a total of three patients who met the



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Matériels et méthode

- Etude rétrospective, exhaustive, bi-centrique entre 2009 et 2015
- SMUR rattaché à un hôpital de niveau I: Grenoble , Annecy
- RENA

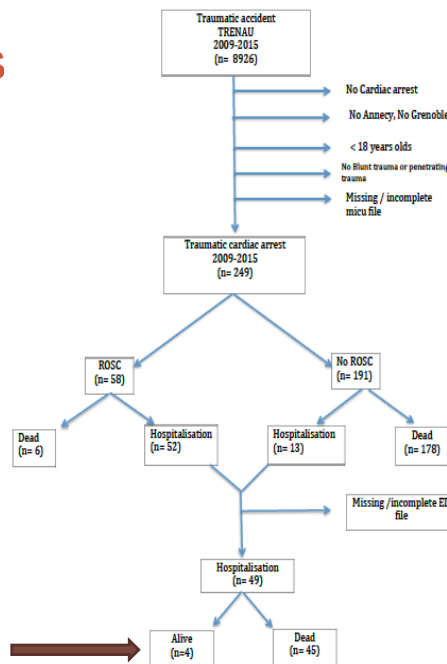
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Matériels et méthode

- Fiches d'intervention SMUR: bilan lésionnel descriptif
- Patients hospitalisés: - bilan lésionnel clinique
 - bilan imagerie
 - bilan biologique
- Traumatismes pénétrants
- Traumatismes contondants

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Flow charts



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Résultats

Caractéristiques de la population prise en charge par le SMUR :

Variables	Total	Hospital admission	Deceased on scene	p
Numbers	249	65 (26)	177 (71)	< 0.001
Men	198 (80)	54 (83)	138 (78)	0.489
Age	48 [31-61]	44 [28-60]	49 [32-62]	0.210
Localisation				
- public place	44 (18)	14 (22)	30 (17)	0.005
- at home	49 (20)	8 (12)	40 (23)	
- public way	123 (49)	37 (57)	82 (46)	
- mountains	32 (13)	5 (8)	25 (14)	
- not specified	4 (2)	1 (2)	3 (2)	
Witness presence				
- with witness	143 (57)	28 (43)	110 (62)	0.005
- without witness	55 (22)	14 (22)	40 (23)	
- with professional rescuer	47 (19)	21 (32)	25 (14)	
- not specified	4 (2)	2 (3)	2 (1)	
Bystander CPR				
- yes	84 (34)	26 (40)	55 (31)	0.250
- not specified	6 (2)	3 (5)	3 (2)	
Medical resuscitation attempt	238 (96)	65 (100)	168 (95)	0.142
Cause of traumatism				
- Blunt trauma	228 (92)	61 (94)	161 (91)	0.646
- Penetrating trauma	21 (8)	4 (6)	16 (9)	
Kind of accident				
- Fall	70 (28)	15 (23)	54 (31)	0.284
- Motor vehicle traffic	121 (49)	35 (54)	82 (46)	
- Struck by	10 (3)	5 (8)	5 (3)	
- Cut/pierce	5 (2)	2 (3)	3 (2)	
- Firearm	14 (6)	2 (3)	11 (5)	
- Mountain activity	24 (10)	4 (6)	19 (11)	
- Others	5 (2)	2 (3)	3 (2)	
Prehospital management (in min)	40 [30-55] (NR=168)	69 [48-99] (NR=48)	38 [27-50] (NR=113)	< 0.001
ROSC				
- Yes	58 (23)	52 (80)	6 (3)	< 0.001
- not specified	4 (2)	3 (5)	0 (0)	
Time for ROSC	14 [7-15] (NR=218)	14 [7-15] (NR=38)	16 [11-20] (NR=188)	0.589

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Résultats

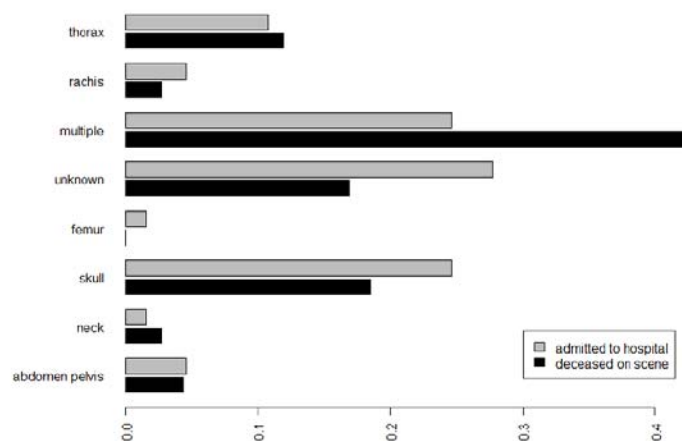
Bilan lésionnel en pré-hospitalier

Variables	Total (249)	Hospital admission (65)	Deceased on scene (177)	p
Main anatomical lesions				-
- Abdomen-pelvis	11 (4)	3 (5)	7 (4)	
- Neck	6 (2)	1 (1)	5 (3)	
- Skull	50 (20)	16 (25)	33 (19)	
- Femur	1 (1)	1 (1)	0 (0)	
- Spine	8 (3)	3 (5)	5 (3)	
- Thorax	29 (12)	7 (10)	22 (12)	
- Multiple	95 (38)	16 (25)	76 (43)	
- Unknown	49 (20)	18 (28)	29 (16)	
Cause of cardiac arrest				0.006
- Anoxia	35 (15)	11 (17)	24 (14)	
- Hemorrhage	32 (13)	13 (20)	18 (10)	
- Head trauma	44 (18)	13 (20)	30 (17)	
- Multiple	90 (36)	12 (18)	75 (42)	
- Unknown	48 (18)	16 (25)	30 (17)	
Hemothorax	50 (20)	4 (6)	45 (25)	0.002
- unilateral	39 (78)	4 (100)	34 (76)	0.562
Pneumothorax	56 (22)	7 (11)	47 (27)	0.015
- unilateral	36 (64)	2 (29)	33 (70)	0.083
Pupils				
- Mydriases	134 (54)	37 (57)	95 (54)	0.761
- Unilateral	13 (10)	5 (14)	8 (8)	0.523

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Résultats

Main anatomical lesions



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Résultats

Bilan lésionnel en pré-hospitalier

Variables	Total (249)	Hospital admission (65)	Deceased on scene (177)	p
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- Abdomen-pelvis	11 (4)	3 (5)	7 (4)	
- Neck	6 (2)	1 (1)	5 (3)	
- Skull	50 (20)	16 (25)	33 (19)	
- Femur	1 (1)	1 (1)	0 (0)	
- Spine	8 (3)	3 (5)	5 (3)	
- Thorax	29 (12)	7 (10)	22 (12)	
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Résultats

Bilan lésionnel à l'hôpital

Variables	Total (49)	Survive (4)	Dead (45)
Main anatomical lesions			
- Abdomen-pelvis	15 (31)	0 (0)	4 (9)
- Skull	2 (4)	1 (25)	14 (31)
- Rachis	7 (14)	0 (0)	2 (4)
- Thorax	14 (29)	1 (25)	6 (13)
- Multiple	7 (14)	2 (50)	12 (27)
- Unknown	7 (14)	0 (0)	7 (16)
Cause of cardiac arrest			
- Anoxia	8 (16)	1 (25)	7 (16)
- Heart trauma	1 (2)	0 (0)	1 (2)
- Hemorrhage	5 (10)	0 (0)	5 (11)
- Head trauma	15 (31)	1 (25)	14 (31)
- Multiple	13 (27)	2 (50)	11 (24)
- unknown	7 (14)	0 (0)	7 (16)
Lesional score ISS			
1-8	1 (2)	0 (0)	1 (2)
9-15	7 (14)	0 (0)	7 (16)
16-75	41 (84)	4 (100)	37 (82)
Hemothorax			
- unilateral	4 (80)	1 (100)	3 (75)
Pneumothorax			
- unilateral	6 (60)	2 (100)	4 (50)
Pupils in mydriases			
	28 (57)	1 (25)	27 (60)
Transcranial Doppler			
- yes	18 (37)	3 (75)	15 (33)
- not possible	7 (14)	0 (0)	7 (16)
- not specified	16 (33)	1 (25)	16 (36)

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Résultats

Caractéristiques de la population prise en charge par le SMUR :

Variables	Total	Hospital admission	Deceased on scene	p
Numbers	249	65 (26)	177 (71)	< 0.001
Thoracostomy	136 (55)	30 (46)	102 (58)	0.149
Transfusion	8 (3)	7 (11)	1 (1)	Pas assez de données pour faire des stats
Transfusion dose				
- blood	2 [2-4]	3 [2-4]	-	
- platelets	-	-	-	
- plasma	-	-	-	
Autotransfusion	2 (1)	0 (0)	2 (1)	
Remplissage	98 (39)	46 (71)	52 (29)	< 0.001
Total solute volume	1000 [500-1000]	1000 [625-1500]	1000 [500-1050]	0.048

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Conclusion

- Survie semblable aux études récentes
- Mieux connaître les lésions rencontrées en cas arrêt cardiaque traumatique
- Pas de forte majoration dû aux activités de montagnes
- Traumatismes contondants restent majoritaires