

Category : **Polytrauma**

A255 - Incidence and leading causes of preventable deaths in a french regional trauma system

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Introduction:

Trauma remains a leading cause of death world-wide, especially among young people. Optimizing care in trauma system remains a challenge. Trauma-related preventable death (TRPD) analysis is one of the means to improve the quality of care. The aim of this study was to assess the TRPD rate in our regional trauma system.

Methods:

Retrospective cohort study.

Trauma patients with fatal outcome hospitalized in Brest university-affiliated hospital in France between 2016 et 2020 were enrolled. Preventable death was defined using the WHO definition. All cases were reviewed by a multidisciplinary panel composed by anesthesiologist, intensivist, emergency doctor, surgeons and radiologists. Primary outcome was the TRPD incidence. Secondary outcomes were the type of errors leading to death according to the Joint Commission on the Accreditation of Healthcare Organizations (JCAHO) taxonomy.

Results:

104 deaths due to trauma were reviewed. Death causes were mainly due to traumatic brain injury (70%), and hemorrhagic shock (20%). The TRPD incidence was 15,4% (7 preventable deaths, 9 potentially preventable deaths and 88 non-preventable deaths). Mean ISS in preventable deaths was 28, and 36 in non preventable deaths (p 0,062).

244 errors were identified, and 82 in preventable deaths (34%). Most errors (53%) were due to excessive delay (diagnostic or treatment).

Conclusion:

Trauma-related preventable deaths occurred in 15.4% of our patients. Triage error, delay and non trauma-team initial resuscitation were the leading causes of errors in the studied population.

Table:

	Preventable deaths (n=16)	Non preventable deaths (n=88)	p
Triage error	7	4	< 0,001
Secondary transfer to level I trauma-center	7	6	0,001
Non trauma-team initial resuscitation	14	38	0,003

Main factors significantly associated with preventable deaths