Category :**Brain: Head trauma**

A172 - ***Infectious extracranial complications in tbi hospitalized in icu: a retrospective analysis in a trauma center***

A Sica ; E Russo ; C Dell´Amore ; A Cittadini ; DP Santonastaso ; D Bellantonio ; G Scognamiglio ; C Turrini ; E Gamberini ; V Agnoletti

Ospedale Maurizio Bufalini, Anestesia e Rianimazione, Cesena, Italy

Introduction:

Aim of the study is to evaluate the frequency of extracranial infectious complications in TBI and the association with various degrees of severity of TBI. TBI is frequently associated with extracranial complications and adversely affects outcome[1]. iVACs causing increased ICU days and duration of MV; uncertain is the impact on survival. The clinical benefit of early aggressive antibiotic treatment has not been demonstrated[2]. There is no indication for antibiotic prophylaxis but vigilant monitoring of the development of iVACs are recommended.

Methods:

A retrospective analysis was conducted on clinical data from patients admitted with diagnosis of polytrauma with TBI, from 1/1/19 to 31/12/19, to the Department Major Trauma AUSL Romagna at the Hospital "M. Bufalini" of Cesena. We collected AIS and ISS (criteria of CENTER-TBI[3]), GCS, presence of MV, percutaneous tracheotomy, development of AKI/CRRT, application of empiric/targeted antimicrobial therapy. We defined the incidence of iVACs and assessed the significant association with clinical score and trauma severity. For statistical analysis Independent Student's t test, Mann Whitney's U test and $\chi 2$ test were used.

Results:

During the observation period 264 patients were admitted. 16.6% of patients developed an infectious process; iVAC in 13.8% (the only ones that have allowed statistical inferential analysis[4]), peritonitis in 1.13% and skin and soft tissue infections in 1.51%. GCS value and AIS head/ISS were lower and higher, respectively, in iVAC group compared to the no-iVAC group; they reached statistically significant differences. Not the same was observed for AIS thorax between the 2 groups[Tab. 1].

Conclusion:

The severity of head injury, quantified using the value of GCS, head AIS, and ISS, has an association with the development of iVAC.

References:

1. Robba C et al. Curr Opin Crit Care.26(2):137-146,2020
2. Chieregato A et al.Minerva Anest.83(6):553-562,2017
3. Steyerberg EW et al.Lancet Neu.18:923–934,2019
4. Esnault P et al.Neurocrit Care.27:187–198,2017

Table:

		NO iVACs	iVACs	pValue
GCS tot.	Average (s.d.)	11,58 (4,15)	8,97 (4,93)	-
	Median (IQR)	14 (7)	7,5 (11,5)	0,003
AIS head	Average (s.d.)	2,5 (2,1)	3,4 (1,9)	0,001
	Median (IQR)	3 (4)	4 (2)	
ISS	Average (s.d.)	32,10 (16,2)	37,47 (10,59)	0,01

	Median (IQR)	29 (16)	36 (11,5)	
AIS thorax	Average (s.d.)/Median (IQR)	2,1 (1,8)/3 (4)	2,4 (1,9)/ 3 (4)	0,436

Table 1