Results from a ICU follow up after severe traumatic brain injury

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Background: Severe traumatic brain injury (TBI) survivors, after prolonged hospital care, may have long-term physical, cognitive and psychological disorders which may disrupt previous relationships and preclude return to work with severe economic and social impacts. The aim of this study is to describe the experience of an ICU Follow up System in TBI patients.

Materials and Methods: In this retrospective observational study we report data from 15 years follow up system based on post discharge phone call interview made, to the patients or to his/her relatives, by a staff intensivist at >6 months after discharge. The primary endpoint,focused in telephone interview, was to evaluate the residual disability using the Glasgow Outcome scale (GOS extended).The secondary end points, focused in outpatient follow up,was to assess the quality of life (QOLIBRI-OS), residual motor and cognitive impairment, post ICU pathway, outcome of intensive management of the acute phase, PTSD and any still present clinical problems.

Results and Discussion: We have analyzed 1945 patients from y 2001 to y 2016,1145 completed telephone follow up and 277 the face to face follow up. Case mix in Tab1. Neurological outcome assessed by telephone interview is described in Fig1. Clinical problems assessed by outpatient follow up are described in Tab 2.

CASE MIX	
Age media (± S.D.)	42.63 (22.7)
Extra-cranial lesions N (%)	1237 (64)
Severe Traumatic brain injury N (%)	1012 (52)
Pupillary abnormality N (%)	569 (30)
mGCS median (IQR)	5 (3)
ICP monitoring N (%)	822 (42)
Mass lesions N (%)	789 (40)
Shift >5mm N (%)	542 (27)
Cisterns compressed/absent N (%)	707 (36)

Tab 1

Fig.1: Neurological Outcome at 6 months (percent data)

■ Total TBI
■ Severe TBI

CLINICAL PROBLEMS	N	(%)
Decubitus	51	(21)
Sleep disorders	32	(13)
Endocrinopathy	7	(3)
Motor disorder	154	(57)
Post Traumatic Stress Disorder (PTSD)	47	(20)
Problem solving deficit disorder	41	(17)
Executive functions disorders	153	(64)
Speech disorder	42	(17)
Behavioural disorder	100	(42)

Tab 2

Conclusion: The follow-up system is an essential component of intensive care to identify evolving clinical problems, to monitor the continuity of care, to understand healthcare utilization, to obtain indicators for clinical governance and to close the circle of human relationships between the ICU staff, patients and caregivers started in the “open ICU”. This, however, requires an organized system of care, a systematic data collection, financial resources and a solid supportive network.