The recent study published by MRC CRASH Trial Collaborators in BMJ,1 in which our group participated, developed an interesting prognosis model for patients with traumatic brain injury (TBI). The most important thing we consider that it has is pragmatism, so necessary for doctors directly related to daily medical practice. Our comment will be focused on the dichotomy between high or low-middle income countries and their relation to the management of TBI in Cuba. We have commented previously on two diseases that have an important burden in mortality: acute myocardial infarction2 and stroke3 (1st and 3rd cause of death).

Trauma takes the fourth place in the death causes and the main burden is due to TBI. Ten years ago in our intensive care unit 47% of trauma admissions were TBI and the mortality rate was 88.4%. In the last years, 25% of all the patients admitted with trauma have a head injury and 10% of them have severe TBI (8 points or less on the Glasgow Come Scale [GCS]). The risk of death is double in patients with GCS between 3-5 points compared with those that have 6-8 points, taking GCS at the admission and after non-quirurgic reanimation. On the other hand, we can relate the decrease of points in GCS in the time have a worse prognosis.

Through the years, we have been working to reduce our mortality rate and we have been able to lower it to 40-45%. In this reduction take place many factors, one of the most important is the application of neuromonitoring because it can show us the intracranial pressure (ICP) and brain metabolic variables like venous jugular oxygen saturation (SvjO2). Other factors that helped us are the possibility of imaging 24 hours a day: computer tomography (CT scan) and resonance imaging (MRI). We have too, the possibility to modify medical or surgery treatment because we have clinical practice guidelines that help us to avoid secondary lesions and to maintain the best conditions to recover the brain from the primary lesion. Is very important to evacuate the lesions that take space like haematomas higher than 20 ml and the practice of decompressive craniectomy with wide duramadre flap. This procedure can improve brain compliance in severe brain injury. In our experience, extracranial injury is related to mortality when low blood pressure (systolic pressure below 90 mm Hg) and hypoxemic events (oxygen arterial pressure below 60 mmHg) are present.

The management of patients with TBI is complicated because it needs a qualified team and enough conditions to offer patients quality care, but our results show that it is possible to do this in low or middle income countries.

References

Competing interests: None declared