

The challenge of neuro intensive care units

Patients with neurological pathologies or severe neurosurgeries, have always received care in general intensive care units. However, with the need for intensive care in patients during postoperative craniotomies and spinal surgery, neurosurgical intensive care units began to emerge. Because of this characteristic of caring for the neurosurgical patient, other patients were hospitalized with diagnoses of cerebral trauma, spinal cord injury, cerebral vascular accident, poor epileptic condition, encephalitis, and severe neuromuscular disease.

Over the past 30 years, neuro intensive care has been growing as a specialty, with various neurological intensive care units worldwide and in Brazil^(1,2,3). In 2002, the international and multidisciplinary neurocritical care society was created (www.neurocriticalcare.org) and in 2004, the first journal dedicated to neurocritical care was published, the *Neurocritical Care Journal*.

The care of the neurocritical patient is provided by a multiprofessional team trained and specialized to recognize and deal with patients, often in situations of risk for irreversible neurological injury or brain death. Generally, this team consists of a physician, nurse, physiotherapist, occupational therapist, speech therapist, psychologist and nutritionist. The impact of this team is to improve the patient's functioning, decreasing the length of stay in the neurologic intensive care unit, reducing mortality and the use of hospital resources^(4,5).

With advancement in technology, neurocritical patient monitoring is no longer restricted to the neurological examination, the computerized tomography examination, monitoring of intracranial pressure or of the cerebral perfusion pressure. Increasingly, the trend is for the multimodal neuro-monitoring, in an invasive or non-invasive manner, with transcranial doppler, continuous electroencephalogram, cerebral blood flow, core and cerebral temperature, partial pressure of O₂ of the cerebral tissue, and microdialysis⁽⁶⁾. The complexity of the neurocritical patient, coupled with various forms of neurological monitoring, requires technical and scientific knowledge of the multidisciplinary team, with a direct impact on the quality of care.

In Brazil, in recent years, both educational institutions as well as specialty societies have mobilized for the development of professional training, through refresher or postgraduate courses, or conferences in neurointensive care. However, there is a shortage of these professionals in neurocritical patient care, which is one of the great challenges for neurointensive care units.

References

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