Acute stroke endovascular treatment: ethical issues in decision making

Carla Guerreiro¹, Sofia Reimão¹, João Madureira¹, Lia Neto¹, and Graça Sá¹

From the Lisbon Stroke Summit, Lisbon, Portugal. 5–6 April 2019.

Abstract

Background: Endovascular therapy has emerged as a ground-breaking treatment for acute ischemic stroke, directly affecting emergency stroke management and resource distribution. In many cases, even with clear guidelines, the best action is uncertain and physicians must reflect on the classical ethical principles of beneficence, nonmaleficence, autonomy and justice to reach a wise decision.

Objectives: To explore ethical dilemmas in acute stroke management, focusing on emergent endovascular treatment.

Methods: Based on three clinical cases, we reviewed the classical principles of bioethics applied to stroke management.

Results: 1. Autonomy and its limits: A patient with dementia presented with less than 4 hours onset of aphasia and left-side hemiparesis. Pre-stroke disability in patients with advanced dementia is often an exclusion criterion for treatment. However, patients and relatives might consider retaining the pre-stroke status a favourable outcome. The principle of autonomy highlights a patient’s (or proxy) right to participate in choosing treatment options. 2. Beneficence/non-maleficence: A patient with left M1 occlusion and critical internal carotid-artery stenosis, submitted to mechanical thrombectomy. Should we consider stenting the stenosis during the procedure? Uncertainty in treatment outcome hampers personalized decision-making in this setting, as haemorrhagic transformation risk may not be dismissible. The principle of non-maleficence is not absolute and balances with the principle of beneficence. 3. Distributive justice: A patient with basilar artery occlusion under mechanical ventilation. Thrombectomy was unsuccessful. Only one bed available in the intensive care unit. How should we manage this patient? Distributive justice concerns the equitable distribution of scarce resources and their prioritization to specific areas and patients, many times in situations where prognosis is uncertain and patient’s wishes unknown. Such biases can lead to errors in decision making and to overuse/underuse of life-supporting measures. Conclusion: Difficult clinical settings where decisions are not straightforward will always subsist. Ultimately, high-quality care implies adhering to the basic principles of medical ethics, pondering scientific evidence and individual care.