Deceased Donor Organ Transplantation: Problems and Managements

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Today the technological advancements in transplantation have made deceased donor organ donation a common and culturally accepted practice. The most immediate and practical solution to the current organ shortage is the maximal use and optimal management of the existing potential deceased donor pool. Brain death is irreversible unconsciousness with complete loss of brain function, including the brain stem, although the heartbeat may continue. Brain death is associated with profound physiologic alterations that result in diffuse vascular regulatory disturbances and widespread cellular injury. Consequently, an implicit understanding of the physiology of brain death not only is crucial to maintaining donor somatic survival and optimizing organ function but also provides a framework to develop strategies that would attenuate this brain death induced inflammatory response. The complex hemodynamic, endocrine, and metabolic dysfunction associated with brain death is frequently associated with major complications in the potential donor. Optimization of the potential for organ salvage is a complex effort. Potential organ donors warrant the same level of aggressive intensive care management that is provided to other patients in a critical care unit. From the time of injury to operative harvest of salvageable organs, significant organizational, clinical, ethical, and social challenges must be overcome. The use of protocolized approaches to identification and care of the potential organ donor has proven an effective strategy for overcoming these obstacles and improving organ donation rates.