2025/07/02 04:39 1/2 cadaveric dura mater graft

A cadaveric dura mater graft refers to a surgical graft made from the dura mater, which is the tough outer membrane covering the brain and spinal cord. In medical procedures, particularly neurosurgery, there are situations where a patient's dura mater needs repair or reinforcement due to injury, disease, or surgical intervention. In such cases, a cadaveric (or allograft) dura mater can be used as a replacement tissue.

Here's how the process generally works:

Donor Selection: The dura mater is harvested from deceased human donors. These donors have typically consented to organ and tissue donation before their death.

Processing: The harvested dura mater is processed to remove any cells and to ensure it is free from infectious agents.

Storage: Once processed, the cadaveric dura mater graft is stored under appropriate conditions until needed for surgery.

Surgical Application: During surgery, the graft is trimmed to fit the area requiring repair or reinforcement. It is then sutured or otherwise secured into place over the damaged dura mater.

Cadaveric dura mater grafts are used in various neurosurgical procedures, including repairing dural defects after tumor removal, in spinal surgeries, and in cases of cerebrospinal fluid leaks. They provide structural support and aid in the healing process. The use of cadaveric grafts eliminates the need for harvesting tissue from the patient's own body (autograft), which can reduce surgical time and minimize additional tissue trauma. However, there are risks associated with the use of cadaveric tissue, such as the potential for disease transmission or rejection, although careful screening and processing protocols aim to minimize these risks.

The number of published cases of presumed iatrogenic cerebral amyloid angiopathy (iCAA) due to the transmission of amyloid beta during neurosurgery is slowly rising. One of the potential ways of transmission is through a cadaveric dura mater graft (LYODURA) exposure during neurosurgery. This is a case of a 46-year-old female patient with no chronic conditions who presented with recurrent intracerebral hemorrhages (ICHs) without underlying vessel pathology. Four decades prior, the patient had a neurosurgical procedure with documented LYODURA transplantation. Brain biopsy confirmed CAA. This is a rare case of histologically proven iCAA after a documented LYODURA transplantation in childhood. Our case and already published iCAA cases emphasize the need for considering neurosurgery procedure history as important data in patients who present with ICH possibly related to CAA ¹⁾.

1)

Fabjan M, Jurečič A, Jerala M, Oblak JP, Frol S. Recurrent Intracerebral Haematomas Due to Amyloid Angyopathy after Lyodura Transplantation in Childhood. Neurol Int. 2024 Mar 4;16(2):327-333. doi: 10.3390/neurolint16020023. PMID: 38525703.

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