Prospective review is recommended/required. Please check the member agreement for preauthorization guidelines.

Prospective review is not required.

Description:

The transplantation of adrenal medullary tissue to the corpus striatum is intended to ameliorate the motor and postural dysfunctions of Parkinson’s disease. Striatal dopamine is depleted in Parkinson’s disease patients. The rational for the procedure is that adrenal tissue may restore dopamine activity in the corpus striatum. Adrenal-to-brain transplantation can involve either autografts or fetal allografts.

Autotransplantation entails simultaneous adrenalectomy and craniotomy with subsequent implantation of adrenal medullary tissue. Adrenal tissue is usually implanted in fragments into the caudate nucleus at the margin of the lateral ventricle, such that the tissue is exposed to cerebrospinal fluid (CSF). Tissue fragments can be anchored in place with surgical staples or with Gelfoam®. Besides the caudate nucleus, the putamen has also been used as an implantation site. Open microsurgical insertion of the tissue has been used in addition to stereotactic localization and implantation using a cannula.

Allografting involves harvesting adrenal tissue from an aborted fetus. The surgical techniques are the same as autotransplantation, with the exception of the adrenalectomy.

Current medical literature on adrenal-to-brain transplantation is limited to small, uncontrolled, short-term studies. Although some patients exhibited clinical improvement in some of the studies, morbidity and mortality rates were high. Pathologic reports performed 6 months to 1 year following surgery indicated that the transplanted cells did not survive, therefore, benefits of the surgery would be of short duration.

The American Academy of Neurology (1999) recommended that adrenal-to-brain transplantation for the treatment of Parkinson’s disease is not acceptable for safety reasons. The Agency for Healthcare Research and Quality (2003) noted that there is a lack of efficacy and substantial morbidity associated with the procedure and concluded that the procedure should not be used to treat Parkinson’s Disease.

Medical Criteria:

Not applicable.

Policy:

Adrenal-to-brain transplantation with autograft or fetal allograft is considered not medically necessary due to the lack of published medical literature which demonstrates the efficacy procedure.
Coverage:
Benefits may vary between groups/contracts. Please refer to the Evidence of Coverage or Subscriber Agreement for applicable Services Not Medically Necessary benefit.

Codes:
S2103 Adrenal tissue transplant to brain

Published:
Provider Update, May 2012
Provider Update, Apr 2012
Provider Update, Jun 2011
Provider Update, Apr 2010

References:


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