Medical Coverage Policy

Adrenal-to-Brain Transplantation

☐ Device/Equipment  ☐ Drug  ☐ Medical  ☒ Surgery  ☐ Test  ☐ Other

| Effective Date: | 02/16/2010 | Policy Last Updated: | 2/15/2011 |

☐ 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 by group/contract. Please refer to the appropriate member certificate/subscriber agreement/Rite Care Contract for services not medically necessary benefits/coverage.

Codes:

S2103 Adrenal tissue transplant to brain

Published:

Provider Update, Apr 2010
Provider Update, Jun 2011

References:


This medical policy is made available to you for informational purposes only. It is not a guarantee of payment or a substitute for your medical judgment in the treatment of your patients. Benefits and eligibility are determined by the member's subscriber agreement or member certificate and/or the employer agreement, and those documents will supersede the provisions of this medical policy. For information on member-specific benefits, call the provider call center. If you provide services to a member which are determined to not be medically necessary (or in some cases medically necessary services which are non-covered benefits), you may not charge the member for the services unless you have informed the member and they have agreed in writing in advance to continue with the treatment at their own expense. Please refer to your participation agreement(s) for the applicable provisions. This policy is current at the time
of publication; however, medical practices, technology, and knowledge are constantly changing. BCBSRI reserves the right to review and revise this policy for any reason and at any time, with or without notice.