

Corporate Medical Policy

Adrenal to Brain Transplantation

File Name: adrenal_to_brain_transplantation
Policy Number: SUR6010
Origination: 12/1988
Last Review: 8/2002
Next Review: 8/2004

Active policy, no longer scheduled for routine literature review.

Description of Procedure or Service

The transplantation of [adrenal](#) medullary tissue to the [corpus striatum](#) is intended to improve the motor and postural dysfunction of Parkinson's Disease.

Parkinson's Disease is a progressive, neurological disease that originates in the [brainstem](#) and involves nerve cell loss. Symptoms include shuffling gait, stooped posture, resting tremor, speech impediments, movement difficulties, and an eventual slowing of mental processes. Parkinson patients have a depleted supply of striatal dopamine. The goal in this procedure is to restore the dopamine activity in the [corpus striatum](#). [Adrenal](#)-to-brain transplantation can involve either [autografts](#) or fetal [allografts](#). [Allografts](#) involve the transfer of human organ and tissue from one person to another, while [autografts](#) involve the transfer from one site to another in the same individual.

[Autologous](#) transplantation involves 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 so 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, cases have also been reported using the putamen 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 auto transplantation with the exception of the [adrenalectomy](#).

Policy

Active policy, no longer scheduled for routine literature review.

BCBSNC will not provide coverage for Adrenal-to-Brain Transplantation with autologous or fetal allograft because it is considered investigational. BCBSNC does not cover investigational services.

Benefits Application

Please refer to Certificate for availability of benefits. This policy relates only to the services or supplies described herein. Benefits may vary according to benefit design, therefore certificate language should be reviewed before applying the terms of the policy.

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When Adrenal-to-Brain Transplantation is covered

Not applicable

When Adrenal-to-Brain Transplantation is not covered

It is not covered because it is considered investigational. BCBSNC does not provide coverage for investigational services.

Billing/Coding/Physician Documentation Information

This policy may apply to the following codes. Inclusion of a code in this section does not guarantee that it will be reimbursed. For further information on reimbursement guidelines, please see Administrative Policies on the Blue Cross Blue Shield of North Carolina web site at www.bcbsnc.com. They are listed in the Category Search on the Medical Policy search page.

Applicable code: S2103

BCBSNC may request medical records for determination of medical necessity. When medical records are requested, letters of support and/or explanation are often useful, but are not sufficient documentation unless all specific information needed to make a medical necessity determination is included.

Policy Key Words

Key Words: Adrenal-to-Brain Transplantation, Parkinson's Disease, Transplant, Dopamine

Medical Term Definitions

Adrenal

refers to the hormone producing glands located on top of the kidneys; each consists of a medulla and cortex area.

Adrenalectomy

the surgical removal of one or both adrenal glands.

Allograft

transfer of human organ and/or tissue from one person to another.

Autologous

derived from the same organism, i.e., self donation.

Brainstem

the lowest part of the brain, which merges with the spinal cord; consists of the midbrain, pons, and medulla.

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Cerebrospinal fluid

a clear colorless fluid that contains small quantities of glucose and protein. The fluid fills the ventricles of the brain and the central canal of the spinal cord.

Corpus striatum

portion of the grey and white brain matter located in front of the thalamus in each cerebral hemisphere.

Craniotomy

any operation on the cranium (skull).

Stereotactic

precise positioning in three dimensional space; it may refer to surgery or radiation therapy that is directed by various scanning devices.

Scientific Background and Reference Sources

BCBSA Medical Policy Reference Manual - 3/96

BCBSA Medical Policy Reference Manual - 3/31/96

Medical Policy Advisory Group - 11/98

Specialty Matched Consultant Advisory Panel - 10/2000

Medical Policy Advisory Group - 10/2000

Specialty Matched Consultant Advisory Panel - 7/2002

Policy Implementation/Update Information

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|---------|---|
| 12/88 | Evaluated: Investigational |
| 7/96 | Reaffirmed: National Association reviewed 3/96. No changes |
| 6/98 | Reaffirmed |
| 11/98 | Medical Policy Advisory Group |
| 9/99 | Reformatted, Description of Procedure or Service revised, Medical Term Definitions added. |
| 10/00 | Specialty Matched Consultant Advisory Panel review. No change recommended in criteria. System coding changes. Typographical errors corrected. Medical Policy Advisory Group review. Approve. No change in criteria. |
| 11/01 | Coding Format Change. |
| 8/02 | Specialty Matched Consultant Advisory Panel review 7/12/2002. No changes. |
| 5/03 | Policy status changed to: "Active policy, no longer scheduled for routine literature review". |
| 12/03 | Benefits Application and Billing/Coding sections updated for consistency. |
| 7/29/04 | HCPCS code S2103 added to Billing/Coding section. |

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Medical policy is not an authorization, certification, explanation of benefits or a contract. Benefits and eligibility are determined before medical guidelines and payment guidelines are applied. Benefits are determined by the group contract and subscriber certificate that is in effect at the time services are rendered. This document is solely provided for informational purposes only and is based on research of current medical literature and review of common medical practices in the treatment and diagnosis of disease. Medical practices and knowledge are constantly changing and BCBSNC reserves the right to review and revise its medical policies periodically.