

Subject: NEUROLOGICAL TESTING CENTER	Pages 4	NTC Policy #6
Title: Electroencephalography Monitoring During Balloon Occlusion	Revision of: NEW	Effective Date:

I. PURPOSE:

To provide guidelines for the monitoring of EEG during a Balloon Occlusion Procedure.

II. CLINICAL GUIDELINE:

EEG during a Balloon Occlusion test is done as an ancillary test in addition to clinical testing to assess brain function while blood supply to the brain is temporarily reduced through a balloon. The test is performed to determine if patients are able to tolerate a permanent occlusion of a cranial blood vessel without clinical symptoms and without changes in the EEG.

III. PERSONS AFFECTED:

Neurological Testing Center technical staff, Attending Neurophysiologist. Neurology, Interventional Neuroradiology team.

IV. PROCEDURE GUIDELINES:**A. SCHEDULING:**

1. Balloon occlusion testing is ordered through Interventional Radiology.
2. The NTC front desk and the technologist assigned to perform the test should notify the IOM attending for that day first thing in the morning and prior to going to the procedure suite.

B. RECORDING:

1. Patient will be escorted to interventional radiology holding area, the patient will be prepped in a bay in the interventional radiology department. During this preparation time, the EEG technologist will place EEG leads according to the International 10-20 guidelines. The patient will be prepared to be monitored in the same manner as for a Video EEG with collodion.
2. The patient will be brought into the IR suite approximately one hour later. Once the patient is brought into the suite, the EEG technologist will prepare equipment in order to monitor the patient during the procedure with EEG. The leads must be prepared neatly, bundled with EKG.

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3. EEG equipment will be kept to the side of the room, and out of the way of other equipment used. It is necessary to keep EEG machine connected to the internet, as the attending that will be reading the EEG must be able to log in remotely.
4. The EEG technologist must start EEG prior to balloon occlusion, to establish a baseline EEG. The technologist must page the reading doctor once the EEG is running to alert them to start time. Baseline clinical deficits and baseline EEG changes need to be discussed and documented.
5. Instant messaging or paging to communicate with the reading physician is critical. The Neurophysiologist needs to be informed about the occlusion ahead of time. During the period of occlusion, frequent communication between the EEG technologist and reading neurophysiologist regarding any clinical changes or EEG changes is necessary. The technologist is expected to relay information about the EEG from the Neurophysiologist to the Neuroradiologist.

C. PATIENT:

1. The technologist will take off the leads in the interventional radiology suite once the procedure is completed.
2. Blood pressure will be monitored throughout the procedure and should be documented in the EEG tracings. Exact times of relevant events, e.g. onset and end of occlusion, clinical changes, communication with the interventional team, should be documented in the EEG recording.

D. DOCUMENTATION:

1. Balloon occlusions have a separate report type in Chartscript (BA). To describe the relevant history and EEG, a template similar to a regular EEG report is used.
2. The report should include timing and duration of the occlusion and describe any clinical and/or EEG changes.
3. The EEG will be monitored by the IOM attending of the day. The impression of the attending should include a description of the EEG. A note should be made that the case was continuously monitored and that changes were reported as they occurred.

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E. BILLING:

1. EEG during Balloon occlusion represents a form of interventional monitoring. The study has a base code for the EEG procedure:
 - EEG/Intraoperative balloon
2. In addition, there is a charge for the duration of the continuous monitoring:
 - IOM Remote monitoring every 15 minutes

POLICY UPDATE SCHEDULE:

Minimum of every three years or more often as appropriate.

REFERENCES:

1. *Guideline 1: Minimum Technical Requirements for Performing Clinical Electroencephalography*, American Clinical Neurophysiology Society, 2006
2. *Guideline 3: Minimum Technical Standards for EEG Recording in Suspected Cerebral Death*, American Clinical Neurophysiology Society, 2006

Appendix A:

NMH NTC Standard Montages

APPROVAL

Responsible Party:	Manager, Neurological Testing and Sleep Disorders Center
Reviewers:	Medical Director, Neurological Testing Center Manager, Neurological Testing and Sleep Disorders Medical Director, Comprehensive Epilepsy Center
Approval Parties:	Manager, Neurological Testing and Sleep Disorders Center Medical Director, Comprehensive Epilepsy Center

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Policy Approved by:

X 

Judith Wood
Manager, Neurological Testing Center

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Stephan Schuele, MD
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