Multiple Sleep Latency Test (MSLT)

Audience: All personnel in the Sleep Disorder Center.

Purpose: To establish technical guidelines for all Multiple Sleep Latency Test (MSLT) procedures performed on outpatients in the sleep disorders center.

Policy: General Considerations

- Polysomnographic (PSG) testing is required the night preceding the MSLT to rule out other sleep disorders and to document the preceding night’s sleep.
  - Potential reasons for exclusion of the MSLT may include a respiratory disturbance index (RDI) greater than 10, a periodic limb movement (PLM) arousal greater than 10 and, or oxyhemoglobin (SAO2) less than 85%.
  - Total sleep time (TST) from the PSG must be greater than 6 hours to support a diagnosis of excessive daytime sleepiness.
  - An MSLT cannot be performed following a PSG that combined a diagnostic and therapeutic study in a single night, referred to as a split night study.
- A consent form for performing the MSLT procedure should have been signed prior to the PSG.
- The patient may provide a two-week sleep diary.
- Medications that affect sleep latency or REM latency such as sedatives, stimulants, alcohol and antidepressants per physician order should have been discontinued two weeks prior to the MSLT.
- MSLT is performed with a patient dressed in street clothes, not pajamas.
- Patient must abstain from caffeine use during the MSLT.
- A urine drugs screen (UDS) may be ordered during the MSLT prior to nap four.
- The patient must sign a consent form for the UDS.
- The patient should abstain from smoking 30 minutes prior to the MSLT nap opportunity.
- No physical activity is permitted 15 minutes prior to the MSLT nap opportunity.
- The patient will be instructed to eat a light breakfast prior to the first nap and a light lunch before or after the noon nap.

Procedure:

1. Determine that an MSLT needs to be performed.
   - If ordered by the referring physician.
   - If the polysomnogram shows nearly normal sleep architecture and minimal sleep-disordered breathing, movement or other disorders that could be associated with hypersomnolence.
• Indications: Rule out narcolepsy. Verify level of perceived hypersomnolence.

2. Obtain urine drug screen (UDS) patient consent form.
3. Obtain UDS panel 2 on the Special Chemistry - Form 2.
4. The MSLT will be performed following a monitored sleep study the night prior to the test.
   • The study will consist of 5 naps at 2 hour intervals.
     o The first nap will begin 1.5 to 3 hours after their final awakening.
     o The test will last 20 minutes in the event that the patient does not fall to sleep.
     o The test will last for (15 minutes + Sleep Latency) in the event that the patient does not fall to sleep.
     o Sleep latency for the MSLT will be determined by the time from lights out to sleep onset. Sleep onset will be recognized by the first epoch of any stage of sleep, including stage 1 sleep.
     o REM latencies (if any) will be defined as the number of minutes from sleep onset to the observation of REM.

5. Performing the MSLT:
   • Patient instructions:
     o The MSLT is a test to monitor for daytime sleepiness.
     o You will be required to take 5 brief naps spaced two hours apart.
     o Be sure you have no appointments or work obligations which will interfere with your ability to stay for the test.
     o The time for the test will vary, but be prepared to stay until 5:00pm.
     o We ask that you refrain from caffeine drinks and tobacco. You can bring an over-the-counter pain reliever from home if you use caffeinated beverages frequently and may experience a headache.
     o You may move about freely in the department between testing trials. Fewer recording monitors are attached than used for the all night sleep study.
     o Street clothes will be worn throughout the duration of the MSLT.
     o Prior to starting each nap the patient can loosen clothing and will remove shoes.
   • Standard MSLT recording sites consist of the following: ECG, LEOG, REOG, C3, C4, M1, M2, F3, F4, O1, O2, and EMG.
     o Please see Hookup Procedure for procedure on hooking up the appropriate recording sites.
o Because electrode sites had been applied for the all night sleep study testing, it is essential that all electrode impedances are measured prior to the onset of each MSLT trial and that any electrode in question be reapplied to ensure adequate test results.

- Settle patient into the examination room and proceed with measures required to ensure patient safety.
  o Electrical calibration and Biocalibration will be performed prior to the onset of and immediately following each MSLT trial.
  o All changes in the position of the patient, level of consciousness, level of cooperation, etc. should be clearly documented on audio/video equipment as well as “Technologist’s Notes”.
  o With each nap opportunity the patient should be instructed as follows: “Please lie quietly, assume a comfortable position, keep your eyes closed and try to fall asleep.” The same instructions should be given prior to every test. Immediately after these instructions are given, bedroom lights are turned off, signaling the start of the test. Between naps, the patient should be out of bed and prevented from sleeping. This generally requires continuous observation by a laboratory staff member.
  o Disconnect the patient from all equipment using safe methods described in the Hookup Procedure.
  o When testing is complete, remind patient that test results cannot be discussed at this time, but that your referring physician will contact you with results.
  o Prepare the patient for departure as outlined in Polysomnography General Procedures.
  o Clean and prepare room and equipment as outlined in Polysomnography General Procedures.