1. Does the panel use different criteria for neuromonitoring changes for intraspinal anomalies Scoliosis patients (ie: 50% amplitude change)? Is there hypersensitivity of the spine? What is the threshold for true positive?

**Dr. Sucato:** There are really no differences with respect to the thresholds for these patients- the standard criteria are generally used (>50% for SSEP and NMEP and “significant” changes for TcMEP). Because it is more common to have critical changes in these patients presumably because the spinal cord is more sensitive it should be remembered to watch for trends that begin to approach these critical levels. In general, the ability to obtain good baseline data is less and so the amplitudes may be smaller and may not be larger enough to use these specific criteria and an “all or none” threshold may be necessary.

2. Is posterior fossa decompression always the appropriate treatment while most of the compression originates from the ventral dens?

**Dr. Hwang:** A posterior decompression alone may not be adequate in certain circumstances. The Grabb-Oaks line (pB-C2) line, a perpendicular distance drawn from the back of the dens transecting a line from the basion to the back of the C2 vertebral body, has been used as a marker to predict failure of posterior decompression alone. Some have used 9mm in length as a predictor that either a fusion or anterior decompression may be required as well. The CXA (clival-C2 angle) has also been used to predict failure of posterior decompression alone (acute angles less than 125 degrees or 135 degrees).

3. What would be your main focus with physical therapy post laminectomy for tethered cord?

**Dr. Hwang:** Typically, if muscle tone or weakness was present, physical therapy would focus on strengthening and stretching as well as gait training.

4. What are the guidelines for dethering in Adolescent patients with asymptomatic low lying cord?

**Dr. Hwang:** This remains a very controversial topic with no standardized consensus. In AIS patients who are older and able to communicate well, I tend to be more conservative. A thorough evaluation may include a thorough history (assessment of recurrent UTI, urological symptoms, etc.) physical exam, and urodynamic testing. Consideration of whether other radiographic findings are present as well such as a fatty filum, thickened filum, what level the conus terminates, presence of a syrinx all influence my decisions as well.
5. For the split cord, what is the neurological complication rate between excision and without excision?

**Dr. Yazici:** This is absolutely unpredictable. Spinal cord stretching may cause neurological symptoms in a spectrum that varies from a transient weakness to a complete paraplegia. It is not realistic to take this risk to patients having a SCM 1 within the surgical field.

6. If we use Monitoring than I cannot obtain a good relaxation of the patient during the surgical correction. Is it correct?

**Dr. Samdani:** Some surgeons will withhold muscle relaxants completely to optimize transcranial motors. Typically, for the exposure we request a small amount of muscle relaxant to facilitate exposure. This typically will last for 30-45 minutes, after which there is minimal if any impact on obtaining motor evoked potentials.

7. As far as we observed clinically, most of the type I SCM bony spurs are not right at the apex, so most of the time we can do a direct apical 3-column osteotomy without neurologic intervention. What's you comment on this?

**Dr. Yazici:** As you may recall, I suggested spur excision if there is an SCM1 within my preoperatively planned instrumentation segments. My neurosurgical colleagues excise the spur and collect both hemicords in one dura first. I make sure that the cord is all right during and after this part of the procedure with neuromonitorization. Following this spur excision, I try to apply whatever contemporary approach for congenital spinal deformity is appropriate for the deformity in question.

If the SCM1 is outside the surgical field and a shortening procedure is being applied, it can be managed safely without being directly addressed. As far as I understand your approach is not different than mine.