

## Peer Review File

Article information: <https://dx.doi.org/10.21037/gc-21-235>

**Reviewer A:** The authors present a patient scheduled for an elective adrenal mass removal who presented with neurologic symptoms in same-day pre-operative evaluation. Based on a medical history of spinal stenosis, the suspicion was that the patient had symptomatic cervical spondylotic myelopathy. Nonetheless, the decision was made to proceed with the case while minimizing airway manipulation through an awake fiberoptic intubation and to utilize intraoperative neuromonitoring. During lateral positioning, loss of MEP and abnormal SSEPs were noted. These changes improved after repositioning the patient supine. The case was cancelled, there was no neurologic deficit on emergence from anesthesia and the patient eventually underwent neurosurgical decompression. This case is interesting from the perspective of using intraoperative neuromonitoring (IONM) in a non-neurosurgical case.

**Comment 1:** However, it appears questionable to proceed with an elective case in the setting of pre-operative concerns for dynamic spinal cord compression.

**Response 1:** We agree with the reviewer. Proceeding with an elective surgery with known preexisting cervical spondylotic myelopathy will be inappropriate. When our patient presented initially, he was completely asymptomatic. No pre-operative imaging was done. The neurosurgical evaluation was not prompted due to a negative review of symptoms and negative examination done by anesthesiologists on pre-operative evaluation. The disease was suspected for the first time on the operative table as detailed in the manuscript. However, we believe that CSM is a chronic process. It cannot be due to an acute event in the absence of trauma, and our patient must have had the disease prior to surgery. However, he was never diagnosed prior to surgery. We edited the text for a better read of the manuscript. See page 2 Line 39-40, and page 6 Line 110-111

**Comment 2:** Based on the information in the case report, it is not clear why cervical spondylotic myelopathy became the first differential diagnosis without supporting imaging studies.

**Response 2:** We edited the manuscript to highlight how we established the diagnosis. See page 9 Line 175-181

**Comment 3:** There are no positive or negative statements to support myelopathy versus radiculopathy (continence, hyperreflexia, extrapyramidal signs etc.).

**Response 3:** We edited the manuscript to detail the clinical circumstances and clarified the diagnosis. See page 6,7 Line 125-129

**Comment 4:** Furthermore, there is conflicting information related to the pre-operative neurologic exam. The abstract states, “when positioned supine...exhibited upper and lower neurologic symptoms”, but the Case description states “when positioned supine...low back pain...bilateral lower extremities”. Such incomplete and conflicting information raises concerns about the neurologic diagnosis since such symptoms can be observed with radiculopathies.

**Response 4:** We agree with the editor. We changed the manuscript to detail the clinical presentation and highlighted how the diagnosis was suspected and confirmed. See page 6 Line 120-122

**Comment 5:** Awake intubation with fiber optic was triggered by the observation of neurologic symptoms and to minimize spinal cord damage during airway manipulation. If that was the reason, then it would be appropriate to provide a neurologic exam after the intubation or a reason for not performing such exam. Otherwise, it should be stated that the reason fiberoptic intubation was not awake and served the purpose of minimizing neck motion.

**Response 5:** Following the emergence of symptoms, a complete neurological evaluation was performed, and CSM was on top of differential diagnosis. The case was discussed with the patient, and options were offered, including postponing surgery. However, the patient elected not to apport surgery and to postpone neurological evaluation following surgery especially given the geographic distance “the patient was out of state”. At this time, we offered an alternative including neuromonitoring with further approaches, including Awake intubation with fiber optic. Details were included in the manuscript.

The anesthesiologist had performed a neurological examination immediately the following intubation. Details were included in the manuscript. See page 7,8 Line 147-150

**Comment 6:** More details about IONM settings, assessment and rationale for interventions needs to be included to discuss the feasibility of ordering IONM for this case.

**Response 6:** The details of IONM are included in the manuscript. See page 7 Line 134-146

**Comment 7:** As an example, it would be useful to include full strips for MEPs and SSEPs with scales that would allow the evaluation of changes in latency and amplitude.

**Response 7:** Full strips for MEPs and SSEPs could not be retrieved at this time. We asked to release the full strip. However, this could not be done because of the mandatory evacuation associated with Hurricane IDA.

**Comment 8:** There is conflicting information on the description of SSEP (posterior tibial nerve vs popliteal nerve in fig#1 description).

**Response 8:** Fig. 1 was corrected. Thank you for the note.

**Comment 9:** The description of events surrounding the worsening MEP/SSEP needs to be detailed to include hemodynamic changes, temperature, and ongoing anesthesia and boluses of anesthetics to allow the reader to assess effects of anesthetics on IOMN.

**Response 9:** We edited the manuscript to highlight the vital signs prior to and after the administration of anesthesia. See page 8 Line 150-151, Page 8 Line 162-163

**Comment 10:** In another critical piece of conflicting information, abstract states “the procedure was aborted” but fig #1 , bullet #6 states robotic-assisted transabdominal adrenalectomy.

**Response 10:** We thank the author for pointing this critical edit. We edited figure 1 to state the exact outcome. See page 3 Line 55

**Comment 11:** In the final recommendation, the authors suggest pre-op MRI and neurosurgery referral for elective, non-spinal surgery. This recommendation is contradictory when compared with the case presented since the case was elective and non-neurosurgical.

**Response 11:** We further detailed our recommendations to include that pre-operative evaluation of the at-risk patients with history, physical examination, and possibly MRI for elective non-spinal surgery. However, if urgent surgery, socio-economic restrictions of the non-spinal surgery do not allow for the pre-operative screening for undiagnosed CSM or in case of the patient rejection of neurosurgical consultation and/or intervention, we suggest implementing IONM as a standard of care for at-risk patients in addition to the established myelopathic precautions. See page 12 Line 246

**Reviewer B:** The authors had presented a case of CSM with dynamic recovery of MEP with position change.

**Comment 1:** This has been observed with cervical spine decompression (Lo et al, 2020) as MEP improvement. This should be discussed.

**Response 1:** The recommended study has been discussed in the manuscript. See page 13 Line 247-250

**Comment 2:** Has the report of dynamic MEP position change been reported previously?

**Response 2:** To our knowledge, this is the first case report that reports dynamic MEP position change

**Comment 3:** Please discuss the SSEP changes in terms of electrophysiological mechanisms.

**Response 3:** The electrophysiologic mechanisms have been included in the manuscript. See page 5 Line 83-88