

ANESTHETIC MANAGEMENT OF A SHORT UROLOGICAL PROCEDURE IN A PATIENT WITH MULTISYSTEM ATROPHY - CEREBELLAR TYPE: A CASE REPORT**AMRUTHA BINDU NAGELLA*, VASIM AKRAM, AKSHAYA AK, RANJITHA MS, SHASHIDHAR SUBBANNA, PRABHA PARTHASARATHY**Department of Anesthesiology, Sapthagiri Institute of Medical Sciences and Research Centre, Bangalore, Karnataka, India.
Email: amruthanagella@gmail.com*Received: 12 December 2022, Revised and Accepted: 10 February 2023***ABSTRACT**

Multisystem atrophy cerebellar type (MSA-C) is a rare, fatal, and progressive neurological disorder characterized by features of atypical parkinsonism and autonomic dysfunction. This condition poses numerous challenges in the perioperative period to the anesthesiologist for the safe conduct of anesthesia. Here, we report a case of 65-year-old male patient with the diagnosis of MSA-C who was posted for a short urological procedure. General anesthesia is usually preferred for MSA-C patients due to the autonomic dysfunction. However, after considering the risks of general anesthesia in MSA-C, we administered a low-dose spinal anesthetic. The patient was hemodynamically throughout the surgery and the post-operative period was uneventful.

Keywords: Multi system atrophy, Autonomic dysfunction, Neuraxial blockade.© 2023 The Authors. Published by Innovare Academic Sciences Pvt Ltd. This is an open access article under the CC BY license (<http://creativecommons.org/licenses/by/4.0/>) DOI: <http://dx.doi.org/10.22159/ajpcr.2023v16i6.47054>. Journal homepage: <https://innovareacademics.in/journals/index.php/ajpcr>**INTRODUCTION**

Multisystem atrophy cerebellar type (MSA-C) is a rare progressive neurological disorder characterized by features of atypical parkinsonism features and autonomic dysfunction. Patients may present with cerebellar signs such as gait disturbances, dysarthria, dysmetria, frequent falls, oculomotor dysfunction in addition to genitourinary symptoms [1]. There is also a risk of central and obstructive sleep apnea in patients with MSA-C. Risk of apnea and autonomic dysfunction is exaggerated by general anesthesia which poses a great challenge during anesthetic management [2-4]. We present a case of a patient diagnosed with MSA-C who underwent a short urological procedure under subarachnoid blockade.

CASE REPORT

A 65-year-old male patient with the diagnosis of MSA-C for 3 years presented with complaints of lower urinary tract symptoms. He was planned for cystoscopy and bladder neck incision. He had complaints of giddiness, frequent falls, generalized weakness, and slurred speech. He was being treated with amantadine, selegiline, tamsulosin, and bethanechol. His heart rate was 74 bpm and blood pressure in sitting position was 140/90 mmHg and standing position was 110/70 mmHg. His hematological and biochemical investigations were within normal limit.

After informed high-risk consent, the patient was planned for the procedure under subarachnoid blockade. Baseline vital parameters were recorded. In addition to standard anesthetic monitoring, invasive arterial blood pressure was also measured to pick up hemodynamic instability rapidly. The patient was pre-loaded with Ringer's lactate 10 ml/kg. In lateral decubitus under aseptic precautions, SAB was performed at L3-L4 interspace using 25G Quincke needle with 0.5% heavy bupivacaine 1.8 ml. Sensory level to pin prick attained was at T10. The surgical procedure lasted for 30 min. The patient hemodynamic parameters were within normal limits throughout procedure.

DISCUSSION

Multisystem atrophy - Cerebellar type is a rare neurodegenerative condition which associated with atypical parkinsonism and autonomic dysfunction [1]. Patients may manifest with central and obstructive sleep apnea, dysrhythmia, dyspnea, hypoxemia, inspiratory sighs, and

laryngeal stridor. Selective paralysis of vocal cord abductors worsens during sleep and may lead to airway obstruction and death [2-4]. When general anesthesia is administered, the patient may require prolonged ventilation. Risk of reintubation or emergency tracheostomy in the post-operative period increases.

Autonomic neuropathy involves both sympathetic and parasympathetic nervous system. Subarachnoid blockade may cause profound hypotension [5]. Therefore, general anesthesia is usually preferred for any surgical procedure. Patients may show increased sensitivity or resistance to vasopressor. Bradycardia due to SAB may be refractory to atropine [6].

There has been report of a patient with MSA-C undergoing a lower limb surgery under combined spinal epidural anesthesia successfully [5]. Our patient was posted for a short urological procedure requiring a low-dose spinal anesthetic and considering the risk of prolonged intubation and ventilation due to central sleep apnea, we decided to perform a low-dose subarachnoid block. We administered of 1.8 ml of 0.5% hyperbaric bupivacaine to achieve a sensory level block of T10. This did not cause any significant hemodynamic variation intraoperatively. He was stable hemodynamically throughout the procedure and post-operative period was uneventful.

CONCLUSION

Anesthetic management of a patient with MSA-C can prove challenging for the anesthetist, with many possible complications. Careful planning of the anesthetic technique weighing the risks versus benefits of differing techniques will help in safe conduct of anesthesia.

AUTHORS CONTRIBUTION

Amrutha Bindu Nagella - Conduct of the case, manuscript preparation. Vasim Akram - Conduct of the case, manuscript preparation. Akshaya AK - Conduct of the case, manuscript preparation. Ranjitha MS - Conduct of the case, manuscript editing. Shashidhar Subbanna - Conduct of the case, manuscript editing. Prabha Parthasarathy - Conduct of the case, manuscript editing.

CONFLICTS OF INTEREST

None.

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CONSENT FOR PUBLICATION

Informed written consent was taken from the patient for publication.

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