

Spinal Anesthesia for Autonomic Dysreflexia Prevention: A Case Report in a Quadriplegic Patient

Sejal J. Shah, MD; Jyoti P. Dangle, MD

Introduction:

- Patients with spinal cord injury (SCI) above T6 often suffer from autonomic dysreflexia (AD).
- Perioperative stressors can contribute to these potentially life-threatening complication such as severe hypertensive response.
- Bradycardia, cardiac arrhythmias and cardiac dysfunction may occur.

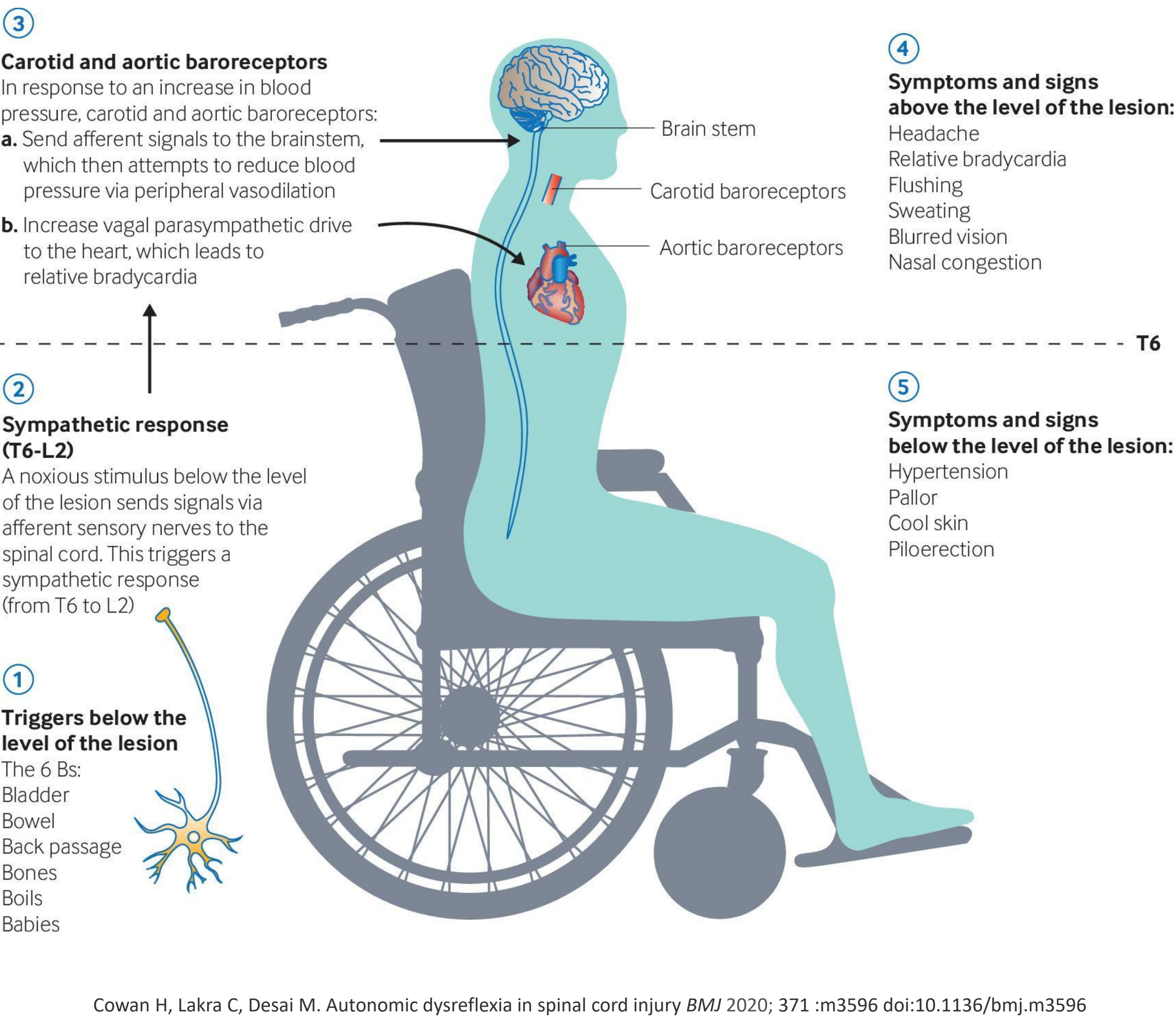
Case Report:

- 22yo male with PMH of cervical spine injury and incomplete quadriplegia who presents for cystectomy with ileal conduit urinary diversion.
- Experienced severe AD with previous urologic procedure.
- Administered spinal anesthesia (SA) after intubation using 2mL of 0.75% hyperbaric bupivacaine and 0.2mg of morphine.
- Initial sympathectomy from spinal treated with phenylephrine boluses.
- Radial arterial line placed for close hemodynamic monitoring.
- Surgical time of 2 hours and 47 minutes – spinal wore off towards the end with blood pressure trending up.
- 0.25mg of nicardipine was administered at emergence as a precaution.
- Patient was successfully extubated to 4L nasal cannula with no hemodynamic swings and no vasodilator infusion requirement.

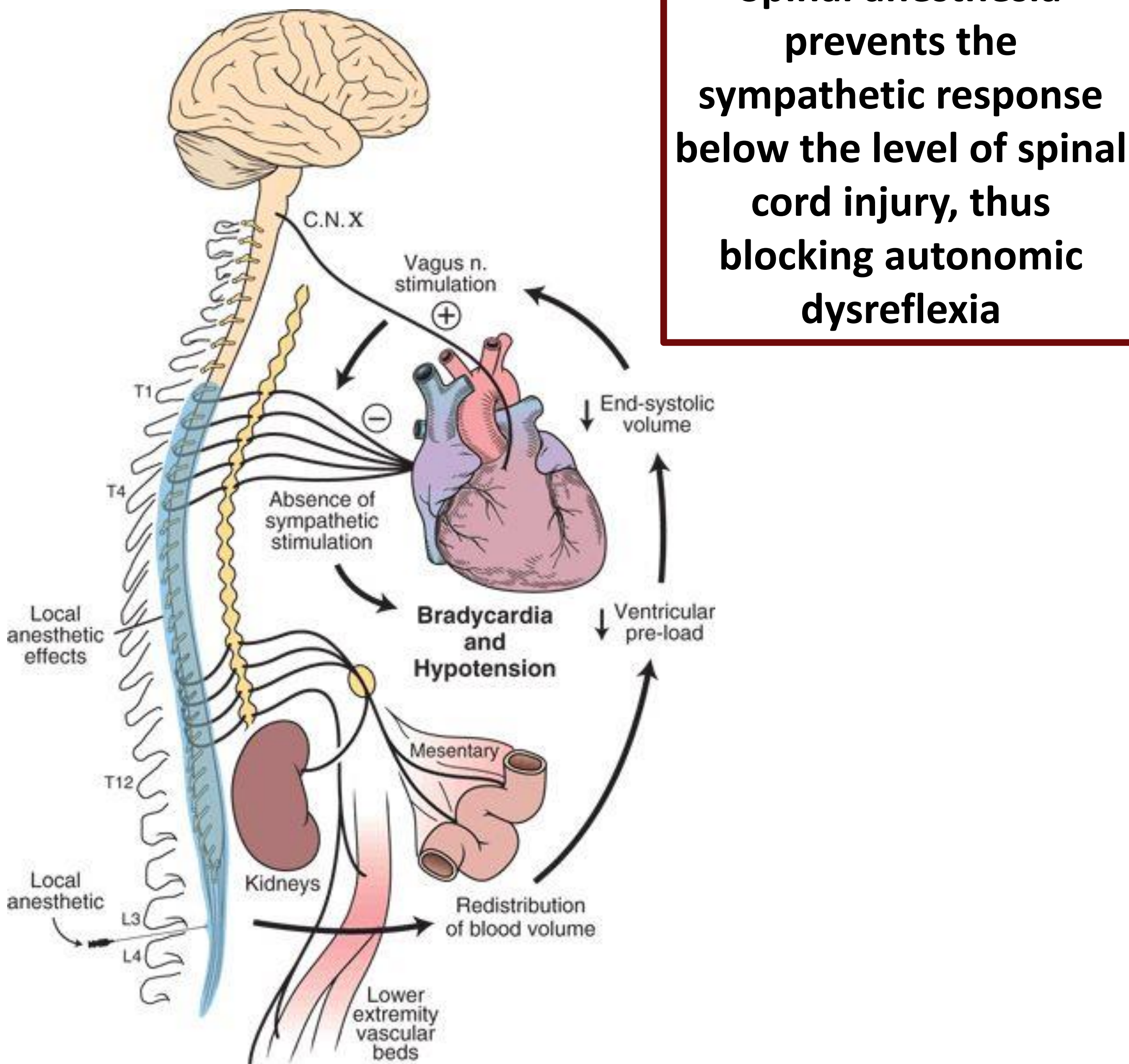
Discussion:

- AD intraoperatively increases the risk of cerebral hemorrhage and cardiac arrest.
- We demonstrated the successful use of SA in preventing AD intraoperatively.
- Must consider length of surgery – longer cases may warrant intrathecal catheters or epidural.
- Titrating epidural anesthesia to appropriate dermatomal levels can be difficult with a possibility of an incomplete sympathectomy.
- Anticoagulation status and infection risk should also be considered.
- In quadriplegic patients undergoing procedural intervention below the level of their SCI, consider SA to prevent AD.

Spinal anesthesia can be used as an intraoperative adjunct to prevent autonomic dysreflexia in quadriplegic patients



Autonomic dysreflexia causes unopposed vasoconstriction below the level of spinal cord injury leading to life-threatening hypertension



Themes U. Hemodynamic complications. Anesthesia
Key. <https://aneskey.com/hemodynamic-complications/>. Published July 28, 2016.