Anaesthesia Issues for the Post-Polio Patients

By Selma H. Calmes, MD, 2014

Retired Anaesthesiologist & Polio Survivor

shcmd@ucla.edu

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1. Non-depolarizing muscle relaxants cause a greater degree of block for a longer period in post-polio patients. The current recommendation is to start with half the usual dose of whatever you are using, adding more as needed.

2. Post-polio patients are nearly always very sensitive to sedative meds, and emergence can be prolonged.

3. Succinylcholine often causes severe, generalized muscle pain postop. It is useful if this **can be avoided, if possible.**

4. Positioning can be difficult due to body asymmetry. Affected limbs are osteopenic and can be easily fractured during positioning for surgery. There seems to be greater risk for peripheral nerve damage (includes brachial plexus) during long cases, probably because nerves are not normal and also because peripheral nerves may be unprotected by the usual muscle mass or tendons.

5. Laryngeal and swallowing problems due to muscle weakness are being recognized more often. Many patients have at least one paralysed cord, and several cases of bilateral cord paralysis have occurred postop, after intubation or upper extremity blocks. ENT evaluation of the upper airway in suspicious patients would be useful.

6. Patients who use ventilators often have worsening of ventilatory function postop, and some patients who did not need ventilation have had to go onto a ventilator (including long-term use) postop. It is useful to get at least a VC preop, and full pulmonary function studies may be helpful. One group that should all have preop PFTs are those who were in iron lungs.

7. The autonomic nervous system is often dysfunctional, again due to anatomic changes from the original disease (the inflammation and scarring in the anterior horn "spills over" to the intermediolateral column, where sympathetic nerves travel). This can cause gastro-oesophageal reflux, tachyarrhythmias and, sometimes, difficulty maintaining BP when anaesthetics are given.

8. Postop pain is often a significant issue. The anatomic changes from the original disease can affect pain pathways due to "spill-over" of the inflammatory response. Proactive, multi-modal postop pain control (local anaesthesia at the incision plus PCA, etc.) helps.