Spinal stenosis: Little air, big trouble

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INTRODUCTION

Spinal stenosis is a narrowing of the spinal canal and neural foramina. Symptoms, like back and/or leg radicular pain, are thought to result from neurologic compression and diminished local nerve perfusion.

Case series and reports suggest that undiagnosed spinal stenosis could be a significant contributor to neurologic complications after neuraxial block.

CASE REPORT

Figure 1. MRI showing a pronounced spinal stenosis in L2-L3 and L3-L4 and an air bubble in L2 (arrow)

DISCUSSION

Patients with spinal canal pathology are usually not candidates for neuraxial blockade because of the risk of exacerbating preexisting neurological deficits or developing new ones.

The mechanism of nerve injury after neuraxial block in this patients is presumed to be local anesthetic neurotoxicity with spinal blockade, enhanced by misdistribution created by degenerative changes within the spinal column.

Although other causes such as ischemia or neurotoxicity cannot be ruled out, the most probable explanation for prolonged motor block in this case was the small pneumocephalus aggravating the previous neural compression.

CONCLUSION

The safety of neuraxial anaesthesia in patients with spinal stenosis remains controversial. Additional research is required to quantify the risk and characterize the mechanism of severe neurologic complications after spinal blockade. A double-crush mechanism should always be kept in mind when considering a spinal technique in patients with preexisting spinal stenosis.

REFERENCES

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