Type of spine procedure influences sentinel event rate

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Image courtesy of Blausen Medical

(HealthDay)—The occurrence of sentinel events varies by type of cervical spine procedure and the number of fusion levels, according to a study published in the April 20 issue of *Spine*.

Alejandro Marquez-Lara, M.D., from the Rush University Medical Center in Chicago, and colleagues utilized data from the Nationwide Inpatient Sample (2002 to 2011) to identify patients who underwent elective cervical spinal surgery (251,318 procedures). Incidence of sentinel events (including esophageal perforation, vascular injury, nerve injury, retention of foreign objects, and wrong-site surgery) were identified.

The researchers found that 123 patients (0.5 per 1,000 cases) incurred sentinel events. There was an increased risk of vascular injury (odds ratio [OR], 4.5) from circumferential cervical fusion (anterior-posterior cervical fusion), while cervical total disc replacement was associated with an increased risk of esophageal perforation (OR, 10.9) and nerve injury (OR, 36.4). The risk of wrong-site surgery was increased (OR, 3.9) with posterior cervical fusions. Longer hospitalization, greater costs, mortality, and greater incidence of postoperative complications were seen in the sentinel events cohort.

"The type of cervical spine procedure and the number of fusion levels significantly impact the risk of sentinel events," the authors write.

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More information: Abstract
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