

SCIWORA is not just child's play: Analysis of the NEXUS data

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Objective: Spinal cord injury without radiographic abnormality (SCIWORA) has been predominantly reported in case series of pediatric patients. Our objective was to better define the incidence and characteristics of patients with SCIWORA, using the National Emergency X-radiography Utilization Study (NEXUS) database of patients with blunt cervical spine trauma.

Methods: We conducted a prospective, observational study of all Emergency Department patients selected by physicians for plain cervical radiography after blunt trauma at 21 medical centers in the United States. Data available for analysis included the patient demographics, presence or absence of the NEXUS criteria, as well as the reports of all cervical spine-imaging studies performed. SCIWORA was strictly defined as the presence of spinal cord injury (SCI) as shown by magnetic resonance imaging (MRI), when a complete and technically adequate plain radiographic series revealed no injury.

Results: Of the 34,069 patients entered into the NEXUS database, there were 818 (2.4%) with SCI, including 27 (0.08%) patients with SCIWORA. Although the participating sites enrolled over 3000 pediatric patients (<18 years old), including 30 with SCI, there were no cases of SCIWORA in children. The most common findings on MRI, among patients with SCIWORA, were central disc herniation, spinal stenosis, and cord edema or contusion. The central cord syndrome was specifically described in 10 (37%) of the 27 cases.

Conclusions: Using strict, objective criteria, we found that SCIWORA was an uncommon disorder, and occurred only in adult patients in the large NEXUS cohort. This is likely due to a much higher overall incidence of SCI in adults compared to children.

The Effect of EM Residency Format on Pursuit of Fellowship Training and an Academic Career

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Objectives: To determine which EM program format (PGY 1-3, 2-4 or 1-4) favors fellowship training or academic career.

Methods: Mailed survey of 122 program directors (PDs) of US EM residencies regarding number of graduates (1995-2000) who pursued fellowships, community practice (teaching/non-teaching), academics, advanced degree, and further residency, both immediately and after 3-5 years.

Results: 54.9% of programs responded regarding 2518 graduates (49.8% of all graduates). More 4-year format graduates pursued academics initially (2-4 vs. 1-3, OR=1.45, 95% CI: 1.15-1.82; 1-4 vs. 1-3, OR=2.20, CI: 1.71-2.82). PGY 1-4 favored academics vs. 2-4 (OR=1.52, CI: 1.14-2.02). 19.4% of 1-3 graduates chose academics, vs. 25.8% for 2-4, and 34.6% for 1-4. PGY 1-4 favored fellowship vs. both 2-4 and 1-3 (OR= 2.23, CI: 1.29-3.88, and OR=2.53, CI: 1.62-3.94, respectively). There was no difference in fellowship pursuit between PGY 1-3 and 2-4 programs. In all, 4.3% of 1-3 residents pursued fellowships, vs. 4.8% of 2-4, and 10.1% of 1-4. For 1995-97 graduates, more PGY 1-4 format graduates were still in academics vs. 1-3 and 2-4 (OR=1.88, CI: 1.28-2.83 and OR=1.68, CI: 1.04-2.72 respectively); there was no difference between PGY 1-3 and 2-4 formats. 219 of the 232 graduates (94.3%) who started out in academics remained there 3-5 years later. In aggregate, 5.2% of graduates pursued fellowships, while 23.1% pursued academics initially. 46/219 (21.0%) academic physicians from the 1995-97 classes were fellowship trained.

Conclusions and Limitations: 4-year formats, especially 1-4, favored fellowships and academics more than the 1-3 format. Fellowship pursuit was uncommon (4-10% of graduates), while 25-35% chose academics. Most new academic EPs, are not fellowship trained. Response rate and recall bias are limitations. Further study should elucidate reasons for these associations.