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Title: Preventable diagnostic errors in fatal cervical spine injuries: a nationwide register-based study from 1987 to 2010

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1 **Preventable diagnostic errors in fatal cervical spine injuries: a nationwide register-based**
2 **study from 1987 to 2010**

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Abstract

17 **Background:** Fall-induced injuries in patients are increasing in number and they often lead to
18 serious consequences, such as cervical spine injuries (CSI). CSI diagnostics remain a challenge
19 despite improved radiological services.

20 **Purpose:** Our aim is to define the incidence and risk factors for diagnostic errors among patients
21 who died following a CSI.

22 **Study Design/Setting:** Retrospective death certificate-based study of the whole population of
23 XXX.

24 **Patient sample:** We identified 2,041 patients whose death was, according to the death certificate,
25 either directly or indirectly caused by a CSI.

26 **Outcome measures:** Demographics, injury- and death-related data, and adverse event-related data.

27 **Methods:** All death certificates between the years 1987 and 2010 from Statistics XXX that
28 identified a CSI as a cause death were reviewed to identify preventable adverse events (PAE) with
29 the emphasis on diagnostic errors.

30 **Results:** Of the 2,041 patients with CSI-related deaths, 36.5% (n=744) survived at least until the
31 next day. Errors in CSI diagnostics were found in 13.8% (n=103) of those who died later than the

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