An appraisal of urgent magnetic resonance imaging service in diagnosing spinal cord compression

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Introduction
Spinal cord compression is a neurological emergency independent of its cause. Magnetic resonance imaging (MRI) of spine is the standard of investigation for diagnosis and guiding further management to prevent long-term disability due to irreversible spinal cord injury.

Objectives
(1) To conduct an appraisal of urgent MRI spine service and compare the results with previous similar study; (2) To study the causes of cord compression; (3) To evaluate patient’s subsequent management after MRI.

Methodology
Retrospective review of urgent MRI spine requests conducted from July 1, 2010 – December 31, 2010. Indications for request, waiting time for MRI examination, imaging findings, patient’s subsequent management and MRI reporting time were evaluated.

Result
Results: A total of 44 cases of urgent MRI spine were included. Average MRI waiting time was 9.8 hours. 97.7% of the MRI exams were performed within 24 hours, which shows a 7.7% improvement compared with previous audit by Wong et al in 2007. 100% reporting by radiologists was achieved, reporting time was on average 1.6 hour, with 97.7% reported within 72 hours. 58.8% of urgent MRI showed cord or cauda equina compression. Malignancy is the commonest cause of compression accounting for 48%. Patients presented with known malignancy were found to have the highest rate of cord compression (80%), highest rate of subsequent intervention (66.7%) and highest rate of early intervention (66.7% within 2 days). Conclusions: Vast majority of referred patients had urgent MRI spine performed within 24 hours with a timely report. Improvement of service is noted compared with results of previous audit. Malignancy is the commonest cause of spinal cord compression in our local population.