An evaluation of emergency department patients referred for urgent lumbar magnetic resonance imaging with suspected cauda equina syndrome.

To calculate the number of urgent lumbar MRI scans referred from A&E in a 6 month period.

To evaluate signs and symptoms of patients sent for urgent MRI scans with and without cauda equina syndrome (CES).

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Subjective History

- NRS mean=7.2/10. LBP=22 LBPULP=46 LBPBLP=7 Other=4 Missing=4

- Numbness/weakness LL: 32
- 30 UI (stress/urge-complete)
- 25 SA (vagina, testicles, scrotum, buttocks)
- 15 UR (complete, reduced flow, incomplete)
- 10 Faecal incontinence
- 7 No neurological symptoms
- 1 Reduced sexual function
Objective Examination

Neurological exam: 36 normal, 3 not tested

- Unilat reflex deficit 9
- Bilat reflex deficit 5
- Brisk reflexes 3
- Upgoing plantars 2
- Reduced unilat power 16
- Reduced bilat power 8
- Reduced unilat sensation 21
- Reduced bilat sensation 6

Per Rectal exam:

- Not documented/refused/not tested=32
- Normal= 19
- Reduced tone normal sensation= 12
- Reduced sensation normal tone=10
- Reduced tone and sensation =9

Post void bladder volume:

- Not tested= 75
- Less than 200mls= 4
- Less than 500mls= 2
- More than 500mls=2
  (> 500mls classified as bladder retention)
MRI and Onward Referral

- Age: mean 41
- NRS: mean 5.75
- LBULP: 9
- LBPBLP: 5
- Urinary retention: 2
- Urinary incontinence: 5
- Faecal incontinence: 1
- Saddle anaesthesia: 3
- Abnormal PR: 1 (7 not tested (NT))
- Normal neuro exam: 3
- Unilat neuro deficit: 10
- Bilat neuro deficit: 1
- Bladder scan (mls): 120, 444, 404 (11 NT)

Large central disc, sequestrated disc, bilateral NRC or CES
Conclusion

The most common cause of CES in this evaluation is a herniated disc in a patient population with a mean age of 45 years.

The presence or absence of CES could not be predicted by subjective or objective examination findings in this population.

The index of suspicion to refer for urgent MRI must remain low.

Inconsistencies in the interpretation of MRI scan results in the presence of stages of CES and the urgency of a surgical review were found.

What about the 1381 patients that presented to the ED with LBP during the same time period that were not sent for MRI?


