

CAUDA EQUINA SYNDROME, TIMING OF SURGERY AND AUTONOMIC OUTCOME

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BACKGROUND & AIMS

- Cauda equina syndrome (CES) is a severe neurological disorder most commonly due to lumbar disc herniation with significant compression on the cauda equina.
- Clinical features can include severe lumbar pain, sciatica, motor or sensory disturbance, saddle anaesthesia and bowel/bladder issues. The most distressing consequence usually is permanent loss of bladder control.
- There is much debate regarding timing of surgery; within 48 hours of onset of symptoms recommended by a meta-analysis (Ahn UM et al, 2000).
- Our aim was to analyse if operating within the 48 hours actually made any difference to bladder function.

METHODS

- Retrospective review of 50 patients who had undergone surgery for CES due to herniated lumbar disc between 2000 and 2007 at a single neurosurgical centre.
- All cases were verified with MRI lumbar spine.
- Data collected included age, pain distribution, date of hospital admission and operation, level of operation, length of autonomic symptoms before operation, time to initial follow up and autonomic outcome.
- Presentation was categorised into complete cauda equina syndrome with retention (CESR) and incomplete cauda equina syndrome (CESI).
- Outcome measures were documented at initial follow up.

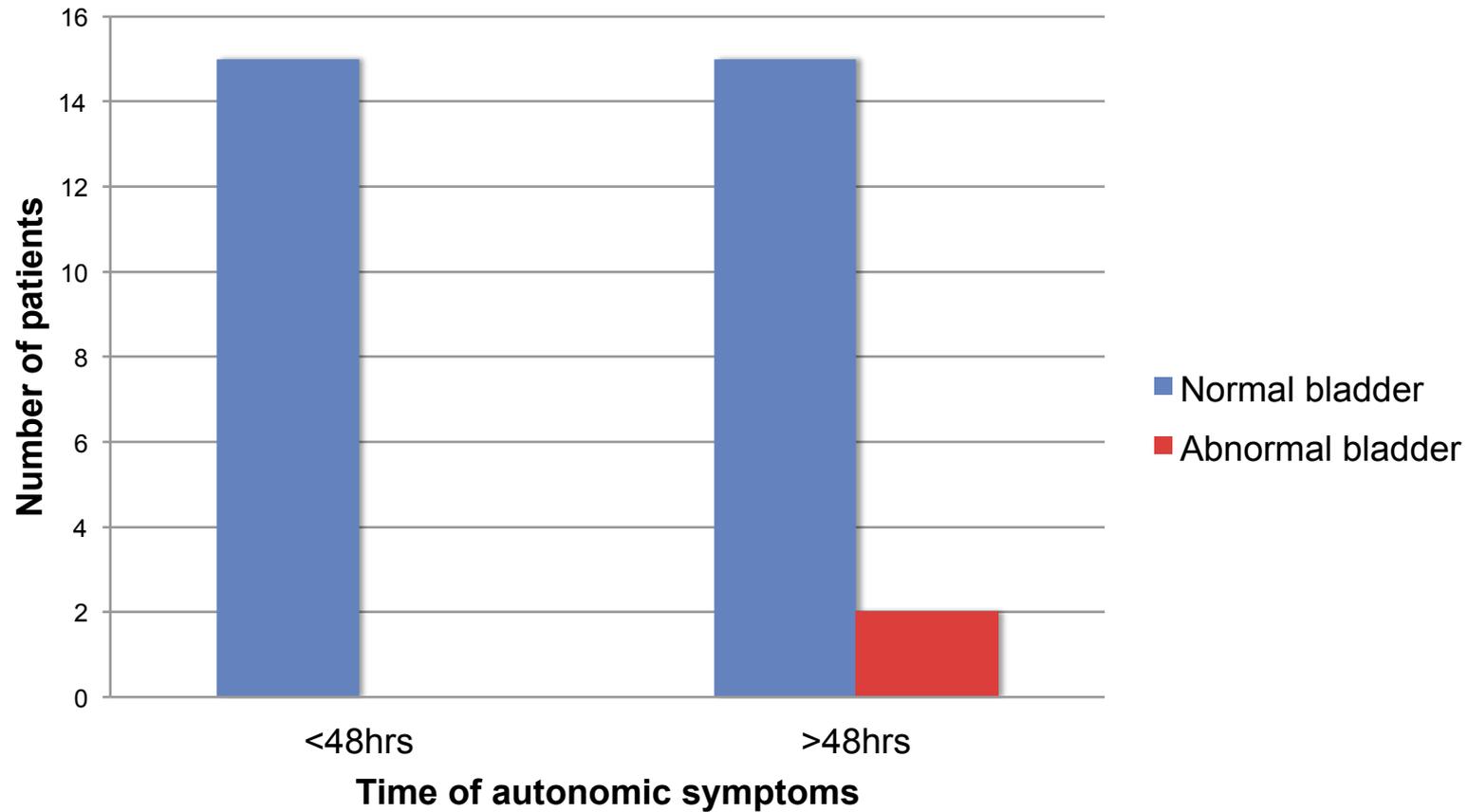
DEFINITIONS

- **Cauda Equina Syndrome with retention (CESR)**- Back pain with sciatica, motor weakness of the legs, saddle anaesthesia, loss of anal tone and established loss of urinary control i.e. painless retention and overflow.
- **Incomplete Cauda Equina Syndrome (CESI)**- As above but with altered urinary sensation e.g. loss of desire to void, diminished sensation, poor stream, and need to strain.

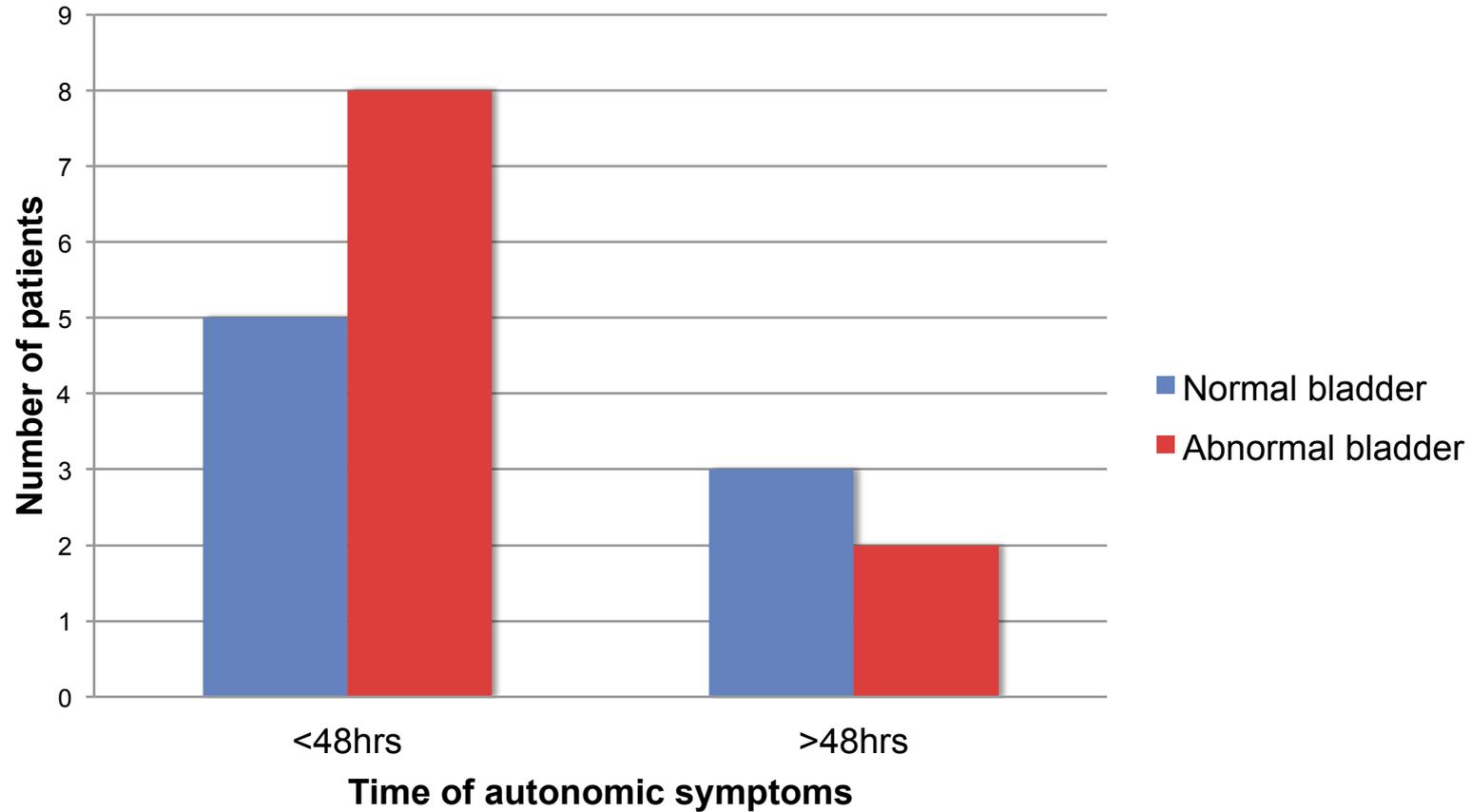
RESULTS

- 50 patients of whom 30 were female and 20 were male with an average age of 42 years.
- All patients had emergency decompressive surgery within 24 to 48hrs of admission to the neurosurgical unit.
- 37 patients presented with unilateral leg pain and 13 with bilateral leg pain.
- Average follow up time was 81 days.
- 32 patients presented with CESI and 18 patients presented with CESR.

CESI BLADDER OUTCOME



CESR BLADDER OUTCOME



SUMMARY

- For all the 15 CESI patients operated within 48 hours of onset of autonomic symptoms normal bladder function was seen at follow up however with 15 CESI patients operated after 48hours 2 had a negative outcome of bladder dysfunction.
- For the 18 CESR patients operating within 48 hours or after made no significant difference to the outcome.
- No difference in outcome depending on sex of patient, unilateral/bilateral sciatica or level of disc prolapse.

CONCLUSION

- In our study emergency decompressive surgery within 48 hours of onset of autonomic symptoms in CESI patients can prevent bladder dysfunction.
- This encourages prompt referral and surgical management within 48hrs of patients presenting with CESI to reduce the possibility of bladder dysfunction.
- For CESR patients operating within 48 hours made no difference to their outcome.

REFERENCES

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DECLARATION

All authors report no conflict of interest.