

# Changing Spinal Cord Injury epidemiology – an impact on bladder management in real life conditions

Righi G<sup>1</sup>, Biscotto S<sup>2</sup>, Cagnetta V<sup>3</sup>, Nardulli R<sup>3</sup>, Musco S<sup>1</sup>, Del Popolo G<sup>1</sup>

1. Spinal Unit, Careggi University Hospital, Florence, Italy, 2. Spinal Unit, Perugia University Hospital, Perugia, Italy, 3. Spinal Unit and Neurorehabilitation Unit, Scientific Institute Cassano delle Murge, Bari, Italy

## AIMS OF THE STUDY

To investigate how changes of Spinal Cord Injury epidemiology is affecting bladder management at the time of discharge from Spinal Unit<sup>1,2</sup>.

## STUDY DESIGN

In the last ten years we observed an increase of age and a subsequent higher incidence of comorbidities between patients with new onset of Spinal Cord Injury (SCI) referring to our Spinal Unit for acute care and rehabilitation<sup>2</sup>.

We also documented a growing percentage of incomplete lesions<sup>2</sup>.

Both the aforementioned phenomena may have a strong impact on bladder management so we decided to perform a survey involving three Spinal Units located in three different regional areas of Italy (Tuscany, Umbria and Apulia)

## MATERIALS AND METHODS

The survey was composed by the following items:

- 1) total number of SCI patients
- 2) number of males and females
- 3) overall mean age, mean age for males and females
- 4) neurological level and grade of lesion
- 5) bladder-emptying methods at discharge
- 6) medications prescribed for neurogenic bladder at discharge

Only patients discharged during 2016 were included in the survey, in order to provide an updated picture of new onset SCI patients in our country.



## RESULTS

We obtained data from a total of 157 patients, 96 males and 61 females with a male/female ratio of 1,6.

Mean age was 57,7 years in the overall population, 56,5 years for males and 60.2 years for females.

We observed a high percentage of cervical lesions (mostly incomplete, 31,9% of our population) with a paraplegic/tetraplegic ratio of 1,34. Our data also showed a very low percentage of lumbosacral complete lesions (only 5,7%).

The percentages of bladder emptying methods at discharge are shown in FIG 2.

With regard to medications, muscarinic antagonists (mostly Oxybutynin) were the most frequently prescribed drugs for females (29,5%) while in males Alpha-blockers (mostly Tamsulosin) were prescribed in 30,2% and muscarinic antagonists in 22,9% of our population.

No medication was prescribed for 67,2% of females and 37,5% of males

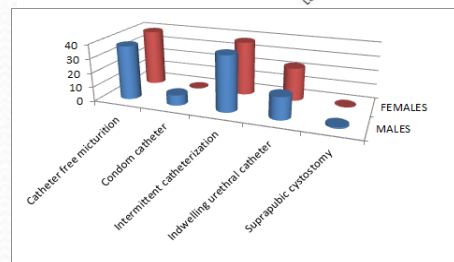
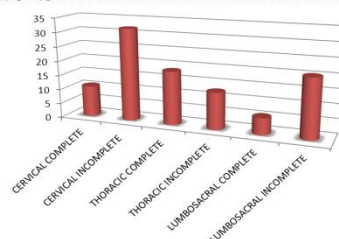
## Interpretation of results

In our opinion, one of the most interesting data emerging from this survey is the high percentage of catheter-free micturition: the more reasonable explanation for this finding - and for the low percentage of patient taking medications as well- is the high percentage of incomplete lesions. The percentage of catheter-free micturition was similar in a paper published by Hansen et al., in which the population had similar characteristics (in particular, low paraplegic/tetraplegic ratio and a high percentage of incomplete lesions)<sup>3</sup>

## Concluding message

Intermittent catheterization is reported to be the best option to manage neurogenic bladder in SCI patients, but we tried to evaluate its true role in real life conditions: because of the increase of age of patients with new onset SCI and the higher percentage of incomplete lesions between them, catheter-free micturition and indwelling catheterization are becoming more common options for bladder management in SCI patients.

FIG 1 – Neurological level and grade of lesions - percentages of the total number of patients.



## References

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## Affiliations to disclose<sup>†</sup>:

No affiliation

† All financial ties (over the last year) that you may have with any business organisation with respect to the subjects mentioned during your presentation

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