

PROMs: the first pilot study of the Italian Arthroplasty Registry performed in the Autonomous Province of Trento

Enrico Ciminello^{1,2,3}, Silvano Piffer³, Cristiana Armaroli^{3,4}, Antonella D'Alpaos⁴, Marco Molinari^{3,5}, Luca Marega⁶, Domenico Amato⁷, Veronica Mari^{1,3}, Marina Torre^{1,3}

¹ Scientific Secretariat of the Presidency, Italian National Institute of Health, Rome, Italy

² Department of Statistical Science, "La Sapienza" University of Rome, Rome, Italy

³ Italian Arthroplasty Registry, Italian National Institute of Health, Rome, Italy

⁴ Clinical and Evaluation Epidemiology Service, Provincial Agency for Health Services of the Autonomous Province of Trento, Trento, Italy

⁵ Orthopedics and Traumatology Unit, Cavalese Hospital, Provincial Agency for Health Services of the Autonomous Province of Trento, Trento, Italy

⁶ Orthopedics Unit, San Camillo Hospital, Autonomous Province of Trento, Trento, Italy

⁷ Orthopedics Unit, Villa Bianca Hospital, Autonomous Province of Trento, Trento, Italy

enrico.ciminello@iss.it

Introduction

Hip osteoarthritis is one of the main causes of functional disability, in particular in the elderly. Even if survival analysis keep being the gold standard to assess patients' safety and devices' performance, the evaluation of patients' quality of life improvements subsequent to arthroplasty by using PROMs (Patient Reported Outcome Measures) is becoming increasingly important. We performed a pilot project in the Autonomous Province of Trento to verify the feasibility of PROMs studies in the Italian Arthroplasty Registry.

Materials and methods

A multi-center study was performed. It was based on the administration of the Hip disability and Osteoarthritis Outcome Score (HOOS) questionnaire to 43 patients with osteoarthritis before and after elective hip replacements, performed in six hospitals of the Autonomous Province of Trento, from May, 1st, 2019 to June, 20th, 2019.

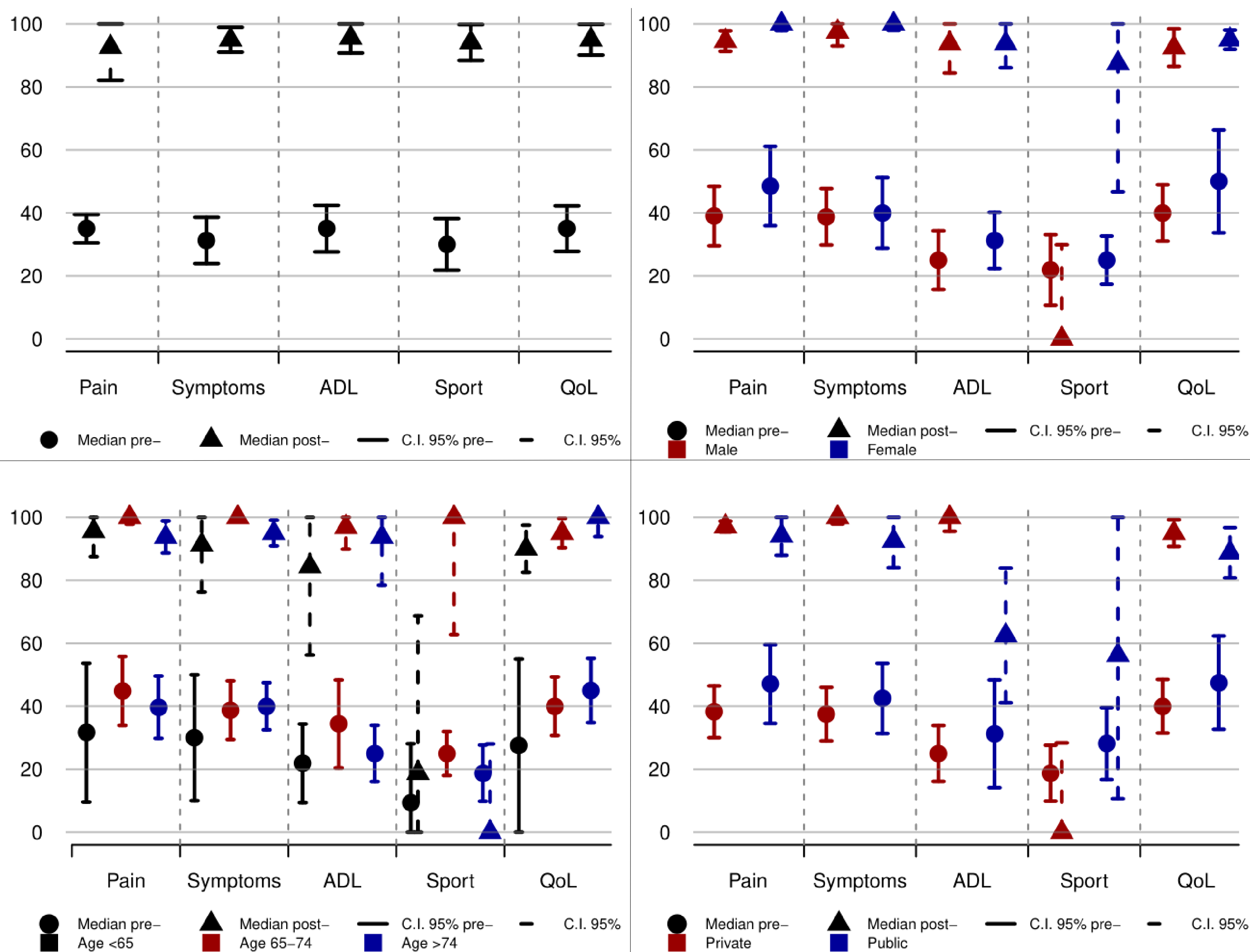
The comparison of the pre- and post-operative outcomes was performed via Medians and Confidence Intervals with boxplots, with focus on the five domains of the HOOS, namely Pain, Symptoms, Activity of Daily Living (ADL), Sport and Quality of Life (QoL), and with stratification for sex, age group (<65, 65-74, >74) and type of hospital (public, private).

Results

- The average improvement in postoperative quality of life is statistically significant for all patients in all five domains.
- For the domains relating to pain, symptoms, ADL and QoL, significance is observed after stratification by sex, age and type of hospitalization facility.
- The Sport does not show a significantly increasing score post-surgery for males and for patients younger than 65 or older than 64 years of age.

Variables	n	%
Sex		
Female	28	65
Male	15	35
Age class		
<65	10	23
65-74	18	42
>74	15	15
Type of hospital		
Public	12	28
Private	31	72
Total	43	

Table: patients' characteristics.



Discussion/Conclusion

The study confirmed the key role of hip replacement in treating osteoarthritis and in improving the patients' quality of life. Anyway, further investigations, with larger sample sizes and possibly involving patients from a wider area are required, to improve the comprehension of the outcome observed in the sport domain analysis.

Anyway, the main goal of the project was to test the feasibility of a possible process of administration and analysis of the HOOS questionnaire on a sample of patients. The low sample size, the way in which patients were selected and the regional framework must be recognized as limitations for the study. The administration of the short form of the HOOS questionnaire will be taken into account in the future, as this could ease hospitals and patients enrollment.

Figure: pre- and post operative HOOS scores. Medians and confidence intervals.