

Interoception sensitivity in Patients with Cervical Dystonia

G. Ferrazzano MD², I. Berardelli MD, PhD¹, A. Conte MD, PhD^{1,2}, G. Fabbrini MD^{1,2}, A. Berardelli MD^{1,2}

¹Department of Neurology and Psychiatry, "Sapienza" University of Rome, Rome, Italy;

²IRCCS Neuromed Institute, Pozzilli (IS), Italy;

Introduction

The interoception sensitivity (IS) is the ability to perceive sensations arising from the inner body including heartbeats. It plays an important role in emotional process. This connection between interoception and emotional process was supported by several studies that showed as the same brain regions are involved, particularly insula. IS was investigated in several neurological and psychiatric disorders, but it has never been investigated in patients with Cervical Dystonia (CD). Assessing IS in CD may increase our understanding of possible emotional disturbances in this disorder.

The aim of our study was therefore to investigate IS in patients with CD. To do this we compared IS values in a cohort of CD patients with age matched healthy controls (HC), and we also correlated IS values with demographic, psychiatric and emotional features.

Materials and Methods

Study Participants and Clinical Assessment

- **20 CD outpatients** (6 males, mean age 54.84 ± 11.4 years) and **20 HC** (9 males, mean age 49.6 ± 15.5);
- **TWSTRS; CDIP-58;**
- **Psychiatric and emotional evaluation**

Heartbeats detection task

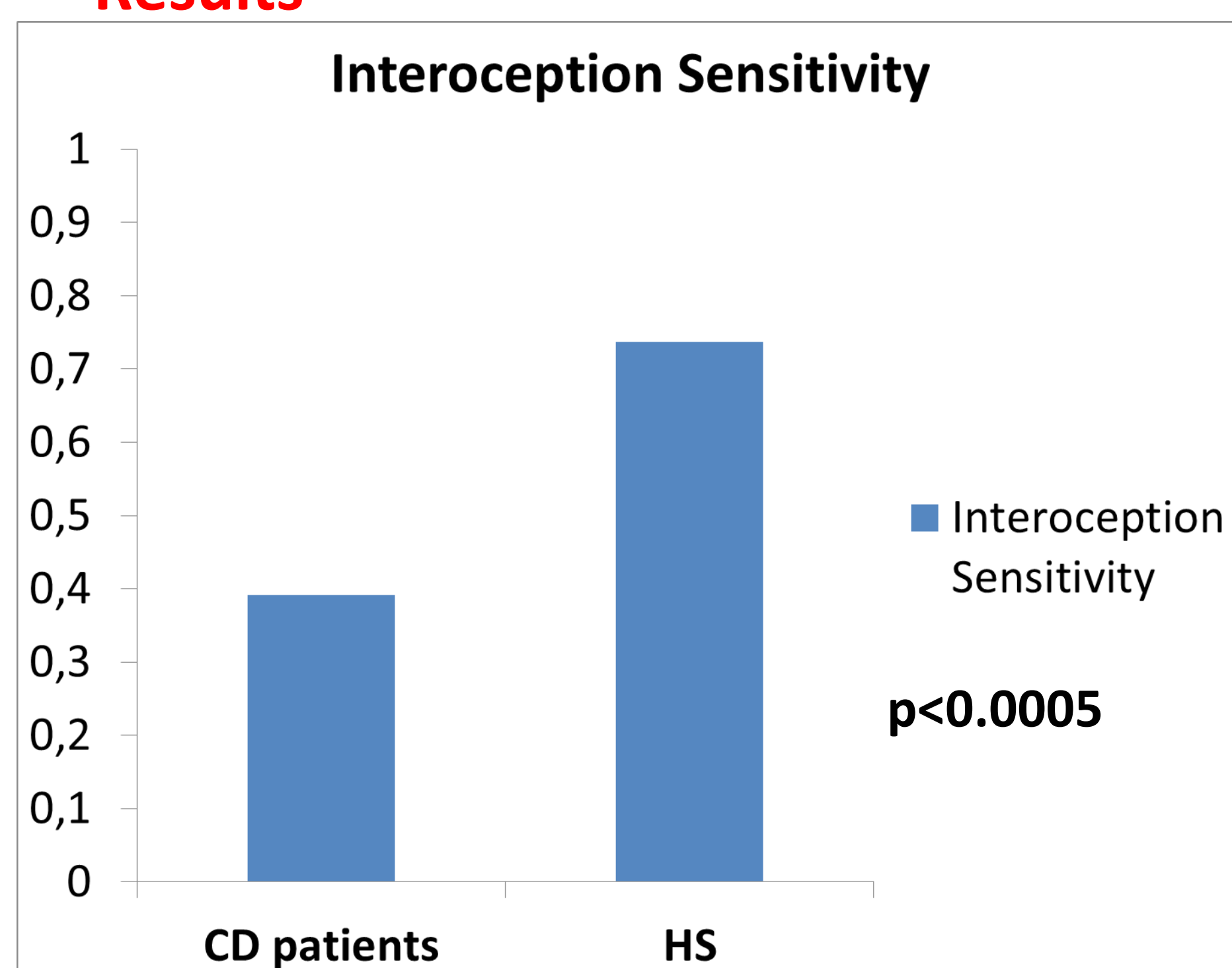
- The 'Heartbeat Detection Task' was performed according to the protocol by Schand



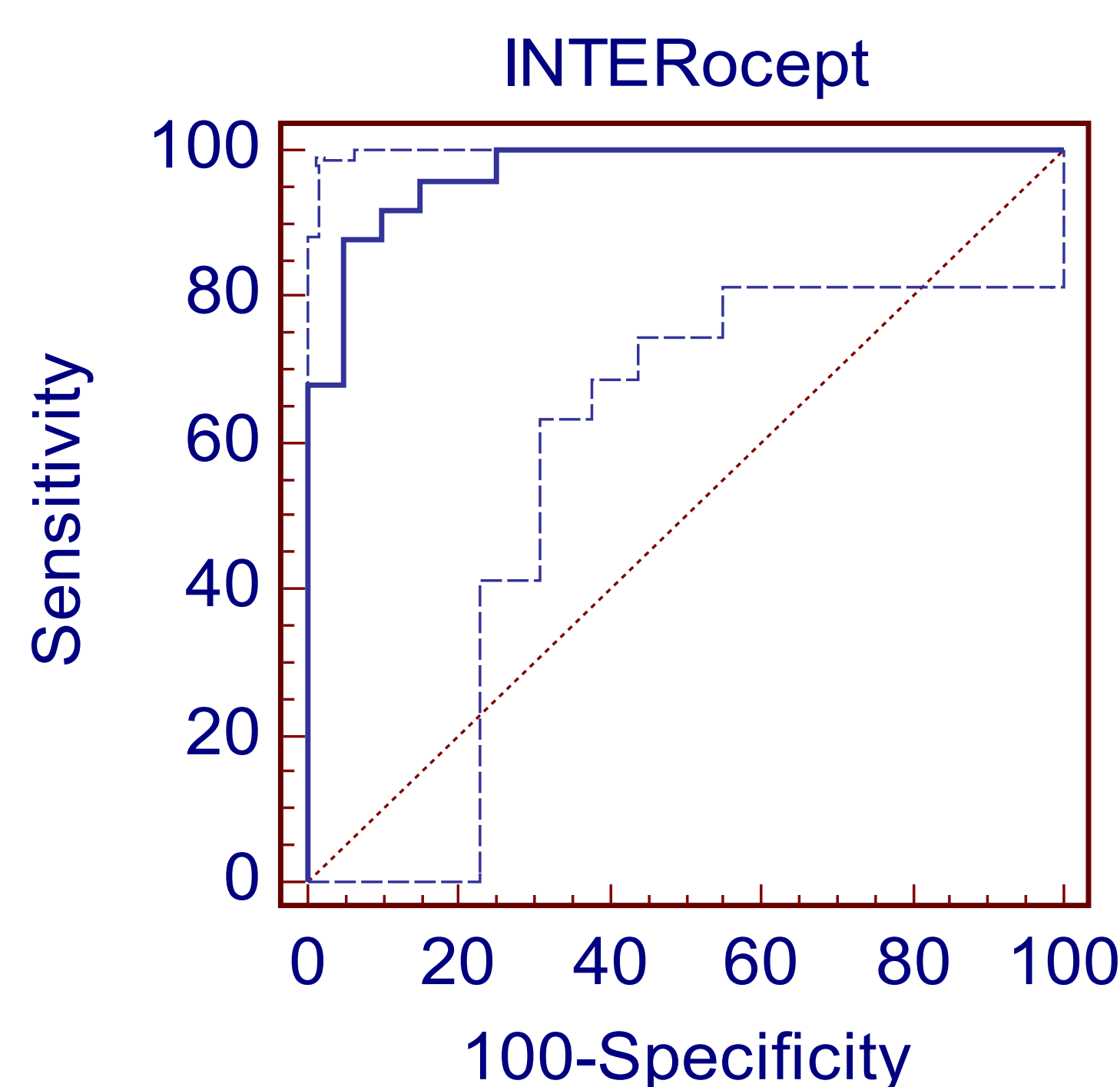
- Heart rate was recorded with a Polar wrist worn heart rate monitor (model V 800)

IS in CD patients and HC

Results



ROC curve analysis



IS value of **0.53**
differentiates CD
patients from HC with
88% sensitivity and
95% specificity

- **NO correlations between IS and affective and disease-related characteristics**
- **5 CD patients had psychiatric diagnosis**

Conclusion

CD patients have a lower IS than HC. Future studies are encouraged to evaluate the importance of interoception in understanding the pathophysiology of affective/emotional symptoms in CD and in other forms of dystonia.