Poster Presentation 50th International Society for the Study of the Lumbar Spine Annual Meeting 2024

Can currently used questionnaires like ODI (and SRS-22) discriminate patients with scoliosis in a population with chronic back pain? (#244)

Fabio Zaina [1] , Carmelo Pulici [1] , Stefano Negrini [2 3]

1. ISICO, Milan, Italy
2. Department of Biomedical, Surgical and Dental Sciences, University “La Statale”, 20122 Milan, Italy; , Milan, Italy
3. IRCCS Istituto Ortopedico Galeazzi, Milan, Italy

Introduction

Scoliosis patients can experience non-specific chronic back pain (CBP) and symptoms connected to their deformity. Discriminating between specific and non-specific pain in scoliosis, as well as between pain due to scoliosis or not in CBP patients would be very helpful in providing a more appropriate treatments to both populations. According to a recent systematic review, patients with symptomatic scoliosis experience asymmetric pain with limitations in prolonged sitting and standing, lifting and travelling. Commonly used questionnaires, explore some of these features, like Oswestry Disability Index (ODI) for CBP and Scoliosis Research Society 22 questionnaire (SRS-22) for scoliosis.

This study aims to check if the ODI can discriminate limitations in scoliosis and non-scoliosis adult patients suffering from low back pain. We also tested the SRS-22 for the same goal as a secondary aim in a subgroup of patients.

Methods

We designed a retrospective study including all the patients who completed the ODI during an initial assessment at our institute for CBP defined as back pain lasting more than three months. We divided patients into two groups, one with scoliosis and one without. According to current literature, we included in the Scoliosis Group (SG) participants with a degenerative spinal curve

larger than 10° Cobb and those with Adolescent Idiopathic Scoliosis and a curve larger than 30°. The other patients were in the non-specific back pain group (NBP). We excluded patients with other deformities like spinal stenosis and Spondylolisthesis.

We compared the ODI total scores, and we analysed each single item. For single items, we assigned a score ranging from 1 to 6 to each answer, with higher scores meaning a worse condition; for the SRS-22, scores ranged from 1 to 5, with higher scores reflecting a better condition.

We used a t-test to compare each single item and the total scores.

Results

Nine hundred eighty-nine patients completed the ODI and entered the study, 516 (437 females) in the SG and 473 (275 females) in the NBP. Compared to NBP, at baseline, SG patients were slightly older (63±9 vs 61±9, p=0.001), had a reduced height (158±17 vs 164±15, p<0.001) and weight (66±21 vs 72±17, p<0.001).

The overall ODI score was similar for scoliosis and NBP (27.38 vs 26.20, p=0.23), while for lifting and standing, the impairment was more relevant for SG (table 1).

For the SRS-22, filled by 329 SG patients and 81 NBP, there were no differences in the total score or any item.

Discussion

Patients with scoliosis confirmed a worse performance in lifting and standing, as previously found. Despite being statistically significant, the differences were relatively small, making clinical interpretation difficult. The ODI seems appropriate and helpful for this group of patients and can be used in clinical practice. The SRS-22, which is supposed to be more specific for scoliosis, did not show any ability to discriminate between different kinds of patients.

Measuring QoL in patients with scoliosis and back pain remains challenging. It could be worth trying to design a new tool more specific for patients affected by scoliosis.

Table 1

	Pain	Self care	lifting	walking	sitting	standing	sleepling	social life	travelling	work
Scoliosis	2.65 ±1.05	1.71±0.98	3.06±1.36	2.06±1.16	2.19±1.10	2.78±1.22	1.98±0.81	2.46±1,30	2.12±1.18	2.75±0.99
No scoliosis	2.69±1.08	1.68±0.96	2.78±1.28	1.92±1.12	2.30±1.18	2.49±1.18	2.08±0.83	2.42±1.26	2.09±1.13	2.62±1.04
p value	0.6	0.56	0.001	0.051	0.14	0.0002	0.08	0.64	0.67	0.052