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BACKGROUND

- **Radioisotopic synoviorthesis** (RS) is an intra-articular local therapy that uses radioisotopes for the treatment of **chronic recurrent synovitis** with inadequate response to conventional therapy.
- Its effectiveness evaluated by ultrasound (US) has not been studied to date, and the factors associated with good US response are currently unknown.

OBJECTIVE

- The aim of this study is to evaluate the **effectiveness** of RS evaluated by US, as well as to determine the **factors associated with US response**.

METHODS

- **Retrospective study** of all patients treated with RS at a tertiary rheumatology center from June 2019 - December 2023.
- Demographic, clinical, and analytical data were collected. The effectiveness of RS evaluated by US is performed according to usual clinical practice at one month and six months post-RS.
- US response at 6 months was defined as synovitis ≤ 1 according to the US **Global OMERACT-EULAR Synovitis Score** (GLOESS).
- Both groups were compared by univariable analysis.

RESULTS

	All patients n= 32	Reponder patients n=14 (43.8%)	Non-responders patients n=18 (56.2%)	p-value
Demographics				
Female, n (%)	20 (62.5%)	10 (71.4%)	10 (55.6%)	0.358
Age at RS, mean (SD)	50.9 (17.3)	50 (15.5)	54.4 (17.6)	0.467
Symptom duration (years), mean (SD)	6.6 (5.9)	10.3 (6.1)	3.1 (2.3)	0.003
Smoking				
Active, n (%)	7 (25%)	3 (23.1%)	4 (26.7%)	0.931
Former, n (%)	7 (25%)	3 (23.1%)	4 (26.7%)	
Non smoker, n (%)	14 (50%)	7 (53.8%)	7 (46.7%)	
Previous treatment				
csDMARD, n (%)	17 (60.7%)	11 (84.6%)	6 (40%)	0.016
bDMARD, n (%)	13 (46.4%)	9 (69.2%)	4 (26.7%)	0.024
tsDMARD, n (%)	3 (10.7%)	2 (15.4%)	1 (6.7%)	0.457
Disease activity				
Tender joint count, mean (SD)	1.3 (0.8)	1.5 (1.1)	1.1 (0.3)	0.266
Swollen joint count, mean (SD)	1.2 (0.5)	1.3 (0.6)	1.1 (0.3)	0.328
Patient global assessment, mean (SD)	6.6 (1.7)	5.8 (2)	7.6 (0.5)	0.042
Physician global assessment, mean (SD)	6.1 (1.7)	5.5 (2)	7.6 (0.5)	0.239
Laboratory variables				
CRP (mg/L), mean (SD)	6.9 (6.6)	6.1 (7.1)	7.7 (7)	0.603
ESR (mm/h), mean (SD)	16.6 (22.4)	12 (9.8)	21.7 (29.4)	0.331
US evaluation				
Baseline GLOESS, mean (SD)	2.4 (0.7)	2.1 (0.8)	2.6 (0.6)	0.074

Table 1. Demographics, clinical, laboratory and US variables of patients treated with RS

CONCLUSIONS

- **Less than half** of the patients treated with RS showed US response at 6 months follow-up.
- **Longer disease duration, higher use of csDMARDs and bDMARDs, as well as lower patient global assessment**, are associated with US response.