

Return to work after arthroscopic rotator cuff repair does not correlate with patients reported outcomes in the Polish population. Preliminary study.

Authors

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1 Introduction

Rotator cuff tears is a condition associated with shoulder dysfunction and pain. It occurs in 20,7% of population with or without symptoms and increases with age (from 2,5% in 30s to 25,6% in 60s) and it is 36% in symptomatic patients [Atsushi Yamamoto, MD, J Shoulder Elbow Surg 2010]. Due to current dates the mean time of returning to work after rotators cuff repair is 8,15 +/- 2,7 months (mean + SD) with only 62,3% returning to previous level of work. Based on random effects modeling, higher rates of return to previous work were identified with decreasing work intensity [Eric D. Haunschild, AOSM 2021]. As a fact of no dates of return to work after arthroscopic rotator cuff repair in polish population we wanted to evaluate it with patient reported outcomes.

2 Objective

The study aimed at analyzing the mean time of returning to work and physical activity, with assessment of their correlation with patient reported outcome measurements determined by GROC, SST and SANE scores.

SST:

1. Is your shoulder comfortable with your arm at rest by your side?
2. Does your shoulder allows you to sleep at night?
3. Can you reach the small of your back to tuck in your shirt with your hand?
4. Can you place your hand behind your head with the elbow straight out to the side?
5. Can you place a coin on a shelf at the level of your shoulder without bending your elbow?
6. Can you lift 0,5 kg to the level of your shoulder without bending your elbow?
7. Can you lift 4kgs to the level of the top of your head without bending your elbow?
8. Can you carry 10kgs at your side with the affected extremity?
9. Do you think you can toss a tennis ball underhand 10 meters with the affected extremity?
10. Do you think you can toss a tennis ball underhand 20 meters with the affected extremity?
11. Can you wash the back of your opposite shoulder with the affected extremity?
12. Would your shoulder allow you to work full-time at your usual job?

3 Methodology

41 adults (>18 y.o.) patients, who underwent arthroscopic rotator cuff repair, with at least 1 year of follow-up and who agreed to take part in the study, were retrospectively studied. We assessed time of return to work and sport and GROC, SST, SANE scores.

GROC - how would you rate your shoulder in comparison to the situation before the surgery, if -7 is much worst and 7 is much better?

SANE - how would you rate your shoulder in the scale from 0 to 100, if 100 is painless shoulder with full functionality?

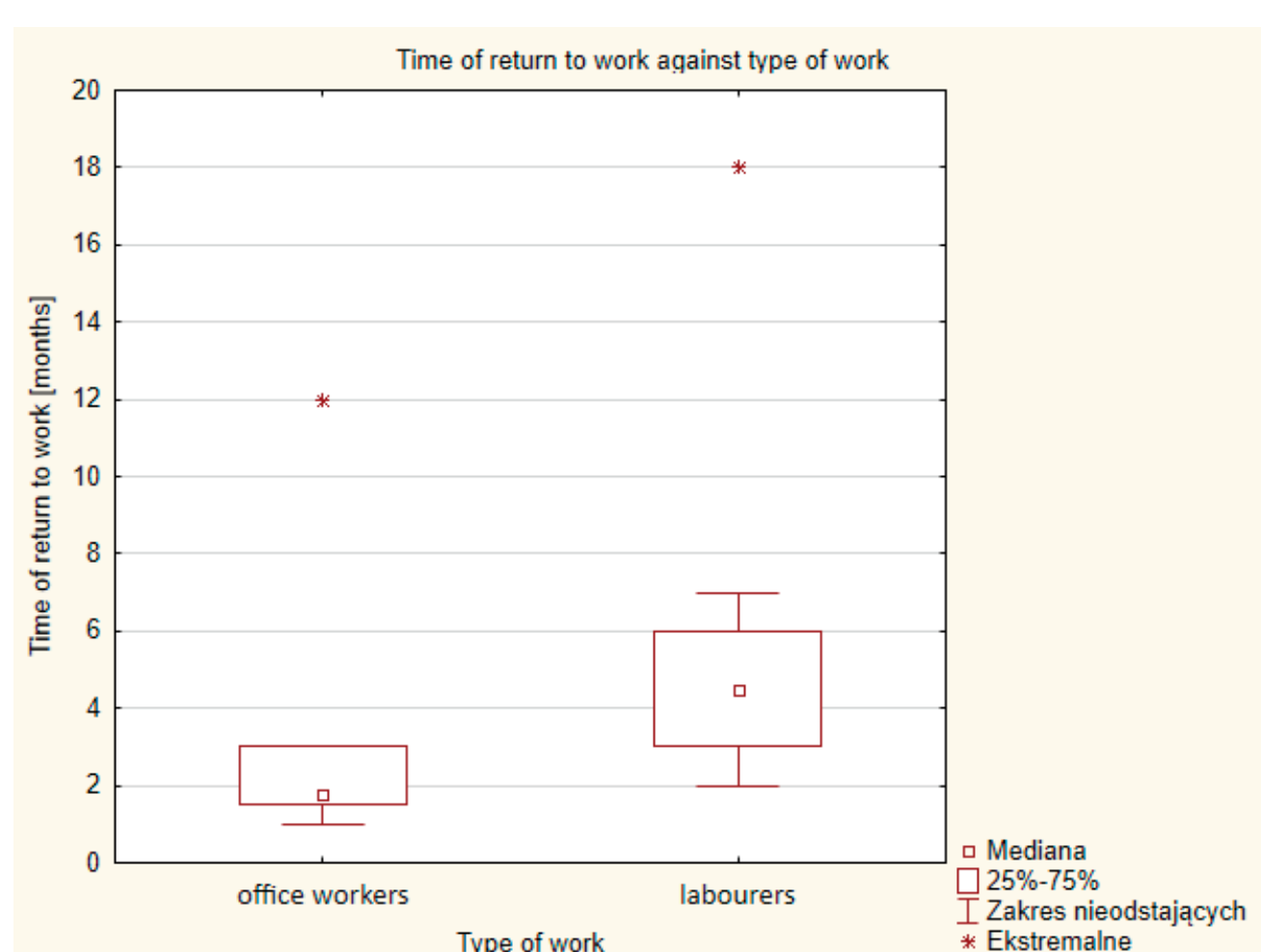
4 Results

Most patients were satisfied with the result of surgery: mean SST – 8,9, SD =3,4, MIN =0, MAX=12, mean GROC 4,9, SD = 2,8, MIN= -5, MAX=7 and mean SANE – 71,9, SD = 21,7, MIN=20, MAX = 100. From all 41 patients 7 were pensioner (17%) and 2 (4,8%) didn't return to work. The mean time of return to work for the rest was 4,23 months: physical workers – 4,79, office workers – 2,9. There was no statistically significant correlation between time of return to work and all 3 scales (GROC – for physical workers – p=0,81, office workers – p=0,48, SST for physical workers – p=0,24, office workers – p=0,37, SANE – for physical workers p=0,63, office workers – p=0,22) in all groups. Correlation between age and time of return to work was not statistically significant (p=0,49) From all 41 patients 17 didn't return to sport. The mean time of return to sport for the rest (24 patients) was 6,79 months. The correlation between each scale and return to work: SANE (p<0,001), GROC (p=0,001), SST (p<0,001) is statistically significant – the higher result, the faster the return to sport.

5 Analysis

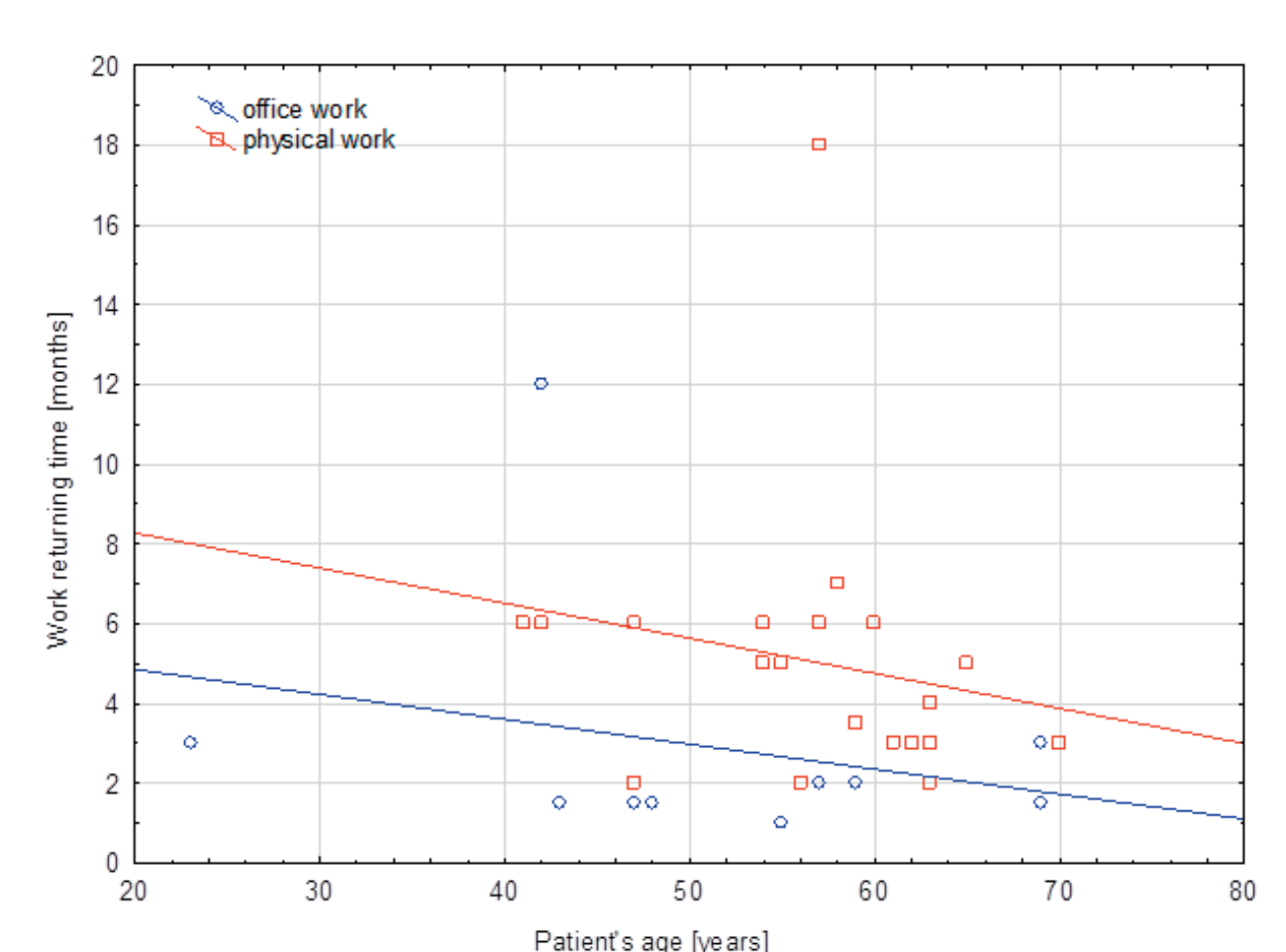
	Kendall's tau	p
SANE	-0.49	<.001
GROC	-0.34	.001
SIMPLE SHOULDER TEST	-0.49	<.001

Statistic analysis of correlation between time of return to sport and SANE, GROC, SST in office and physical work (using Kendall's tau)



	Kendall's tau	p
Office work		
SANE	-0.29	0.22
GROC	-0.16	0.48
SIMPLE SHOULDER TEST	0.21	0.37
Physical work		
SANE	-0.07	0.63
GROC	-0.04	0.81
SIMPLE SHOULDER TEST	-0.18	0.24

Statistic analysis of correlation between time of return to work and SANE, GROC, SST in office and physical work (using Kendall's tau)



6 Conclusion

1. According to the assessment scales used, patients were satisfied with the postsurgical results.
2. Patients with higher values of SANE, GROC or SST have returned to physical activity faster
3. Office workers returned to work faster than labourers.

Related literature

1. Prevalence and risk factors of a rotator cuff tear in the general population (Atsushi Yamamoto, Kenji Takagishi, Toshihisa Osawa, Takashi Yanagawa, Daisuke Nakajima, Hitoshi Shitara, Tsutomu Kobayashi J Shoulder Elbow Surg 2010 Jan)
2. Return to Work After Primary Rotator Cuff Repair: A Systematic Review and Meta-analysis (Eric D. Haunschild, BS, Ron Gilat, MD, AOSM 2021)