암재활 발표일시 및 장소 : 10 월 27 일(토) 14:10-14:20 Room E(5F)

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Effectiveness Of Physical Rehabilitation In Advanced Cancer Patients : A Systematic Review

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Purpose

To evaluate the efficacy of supervised-exercise rehabilitation in advanced cancer patients from systematic reviews.

Methods

A systematic search of electronic databases, including MEDLINE, EMBASE and the Cochrane Library, as well as three domestic databases from inception to 3 July 2017, was performed. Two reviewers independently screened all references according to selection criteria. The Cochrane Risk of Bias (RoB) tool for randomized controlled trials (RCT), and the Risk of Bias for Non-randomized Studies (RoBANS) were used to assess quality of literature. Data from RCTs and pre-post studies were combined and meta-analysis was performed.

Results

A total of 11 studies were included. Four studies were RCTs and the remaining seven studies were pre-post studies respectively. Meta-analyses were performed by study design. For RCT meta-analyses, exercise interventions showed little reduction in fatigue compared to the control group with, standardized mean difference (SMD) of –0.62 and Confidence Interval (95% CI: –0.87 - 0.37). In meta-analyses for pre-post studies, exercise interventions resulted in improvements in muscular strength from baseline to follow-up: Leg press (mean difference (MD): 12.13, 95% CI: 5.90 - 18.35); Bench press (MD 4.81, 95% CI: 0.85 - 8.77); Abdominal crunch (MD 6.48; 95% CI: 2.01 to 10.96); Back (MD 5.18; 95% CI: 1.59 - 8.77). Exercise interventions have a positive impact on quality of life measured by EORTC-QLQ-C30 from baseline to follow-up (MD 9.86, 95% CI 1.56 - 18.34).

Conclusions

Exercise may have beneficial effects on fatigue and be effective to improve muscular strength for advanced cancer patients based on existing studies. However, the positive Results must be interpreted cautiously because of the heterogeneity of studies. More

studies are needed to further investigate how to sustain positive effects of exercise over time.



Effectiveness of rehabilitation on quality of life using systematic reviews with randomized controlled studies

leg press (kg)

•••	1	Before			After			Mean Difference					
Study or Subgroup	Mean	SD	Total	Mean	SD	Total	Weight	IV, Random, 95% CI		IV, F	andom, 95%	6 CI	
Cormie 2014	73.5	18.9	15	70.8	18.8	20	24.3%	2.70 [-9.92, 15.32]			-		
Jensen 2014 (resistance exercise)	49	15.35	11	33.5	10.05	11	32.9%	15.50 [4.66, 26.34]					
Quist 2015	86.1	32.8	71	71.5	30.2	71	36.0%	14.60 [4.23, 24.97]					
van den Dungen 2014	116.4	45.9	22	100	37.4	26	6.7%	16.40 [-7.57, 40.37]			-	_	
Total (95% CI)			119			128	100.0%	12.13 [5.90, 18.35]			•		
Heterogeneity: Tau ² = 0.00; Chi ² = 2. Test for overall effect: Z = 3.82 (P = 0	85, df = 3 .0001)	8 (P = 0.	41); l²=	: 0%					-100	-50 before fav	ours after f	50 avours	100

Knee extension (kg)

	E	Before			After			Mean Difference		Mean	Differenc	e	
Study or Subgroup	Mean	SD	Total	Mean	SD	Total	Weight	IV, Random, 95% CI		IV, Rand	lom, 95%	CI	
Jensen 2014 (resistance exercise)	15	5.405	11	14.5	7.045	11	31.2%	0.50 [-4.75, 5.75]			+		
Quist 2015	28.3	11.5	71	24.9	9.9	71	68.8%	3.40 [-0.13, 6.93]					
Total (95% CI)			82			82	100.0%	2.50 [-0.43, 5.43]			•		
Heterogeneity: Tau ² = 0.00; Chi ² = 0.8 Test for overall effect: Z = 1.67 (P = 0.	31, df = 1 09)	(P = 0.	37); I² =	:0%					-100	-50 before favour	0 s after f:	50 3VOULS	100

bench press (kg)

Effectiveness of rehabilitation on physical performance using systematic reviews with pre-post studies

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EORTC-QLQ-C30: QOL/global health state

EORTC-QLQ-C30: role functioning

	After Before					Mean Difference							
Study or Subgroup	Mean	SD	Total	Mean	SD	Total	Weight	IV, Random, 95% CI		IV, Ra	indom, 95%	CI	
Jensen 2014 (aerobic exercise)	75	21.2	10	53.3	29.2	10	41.9%	21.70 [-0.66, 44.06]			-		
Jensen 2014 (resistance exercise)	42.4	21.5	11	25.8	23.9	11	58.1%	16.60 [-2.40, 35.60]			-	_	
Total (95% CI)			21			21	100.0%	18.74 [4.26, 33.22]			-	•	
Heterogeneity: Tau ² = 0.00; Chi ² = 0.12, df = 1 (P = 0.73); l ² = 0% Test for overall effect: Z = 2.54 (P = 0.01)									-100	-50 after favo	0 urs before	50 e favours	100

EORTC-QLQ-C30: fatigue

	1	After		Before				Mean Difference		Mean	Difference	ce	
Study or Subgroup	Mean	SD	Total	Mean	SD	Total	Weight	IV, Random, 95% CI		IV, Ran	dom, 95%	CI	
Jensen 2014 (aerobic exercise)	40	15	10	61.1	26.3	10	29.6%	-21.10 [-39.87, -2.33]			-		
Jensen 2014 (resistance exercise)	46.5	24.3	11	70.7	21.2	11	29.1%	-24.20 [-43.26, -5.14]		-	-		
van den Dungen 2014	34.1	22.5	22	38	24.8	26	41.3%	-3.90 [-17.29, 9.49]			-		
Total (95% CI)			43			47	100.0%	-14.90 [-28.36, -1.44]		-			
Heterogeneity: Tau ² = 67.59; Chi ² = 3 Test for overall effect: $Z = 2.17$ (P = 0.	.81, df= .03)	2 (P =	0.15);	I² = 48%	,				-100	-50 after favou	0 rs before	50 favours	100

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Effectiveness of rehabilitation on quality of life using systematic reviews with pre-post studies