통증 및 근골격재활

게시일시 및 장소 : 10 월 18 일(금) 08:30-12:20 Room G(3F)

질의응답 일시 및 장소 : 10 월 18 일(금) 10:00-10:45 Room G(3F)

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Is scapular stabilization exercise effective for managing non-specific chronic neck pain?

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Purpose

Scapular stabilization is thought to have an important role in improving pain and dysfunction around the neck and shoulders, but evidence of this is lacking. We aimed to systematically review the effect of a scapular stabilization exercise (SSE) on pain and dysfunction in patients with non-specific chronic neck pain (NP).

Methods

We searched the PubMed, EMBASE, CINAHL and Cochrane Library databases using the terms (neck pain [mesh] OR neck pain OR cervical pain OR neck ache OR cervicalgia) AND (scapular exercise OR periscapular exercise OR scapular stabilization exercises). We included suitable studies the met the study's inclusion criteria.

Results

Among the 227 studies identified by our search strategy, a total of four (three randomized controlled studies, one prospective study) met the inclusion criteria. The SSE was intense 3 and included there sets of 10 repetitions. In most of the studies, the exercises were conducted with three times per week. The most studies reported that the SSE improved pain and dysfunction in patients with non-specific chronic NP but the reviewed articles did not use the same variables for measurement and had a small sample size.

Conclusion

Although several studies showed that SSE might improve the neck pain and dysfunction, the effects of SSE on pain and dysfunction of neck region remain unclear because the number of studies was small. Further high-quality studies are necessary to identify the detailed effects of SSE in patients with NP.

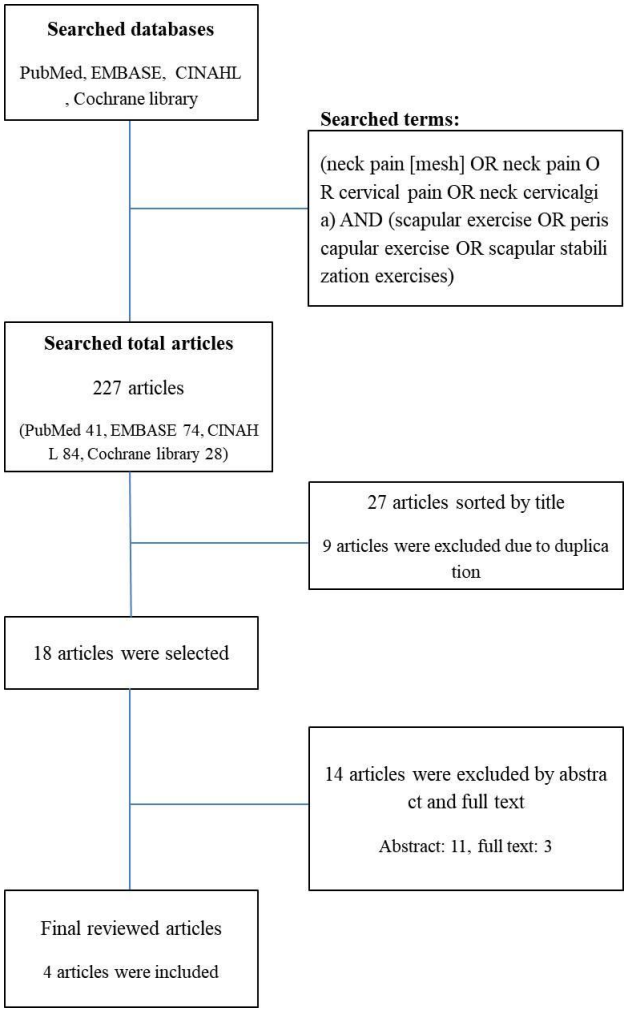

Fig. 1 Flowchart of articles search

Reference	Study deign and participants	Exercise intervention	Outcome and key finding
Andersen et al. (2014)[14]	RCT (N=47) n=24, training (44±13, male 5, female 19) n=23, control (45±11, male 5, female 18)	F: 3 times/week for 10weeks I: 10-20Rep/3-5Sets/10sec hold T: 20min T: Strengthening	Self-rated pain intensity: decreased (p <0.01) Pressure pain threshold: UT increased from 227 to 405 kPa (p<0.05) Shoulder elevation strength increased in 7.7 kg (p<0.01)
Im et al. (2016)[15]	Prospective study (N=15) n=8, study (35.5±8.8) n=7, control (35.7±9.8)	F: 3 times/week for 4weeks I: 10Rep/3Sets/10sec hold T: 30min T: Strengthening	ROM: CVA increased from 38.2 ± 2.5 to 49.3 ± 4.9 ° Muscles EMG: UTM decreased from 40.6 ± 10.5% to 29.0 ± 7.5% and SAM increased from 28.5 ± 7.6% to 37.4 ± 8.1% VAS decreased from 6.3 ± 1.7 to 3.1 ± 1.1 and NDI improved from 14.4 ± 8.1 to 7.9 ± 3.1 WHOQOL-BREF improved from 84.1 ± 9.4 to 96.1 ± 5.4
Kang et al. (2018)[16]	RCT (N=30) n=15, SSE (31.8±7.5) n=15, NSE (33.8±4.8)	F: 3 times/week for 4weeks I: 10Rep/3Sets/3sec hold T: 30min T: Strengthening	ROM: CVA increased from 49.5 ± 3.8 ° to 53.9± 3.4 ° and CRA decreased from 147.5± 3.7 ° to 53.9 ± 3.4° Muscles EMG: SCM and UTM decreased from 38.9 ± 10.2% to 36.1 ± 10.1% and from 46.9 ± 5.5% to 43.9 ± 6.1%, respectively. LTM and SAM increased from 32.8 ± 7.5% to 36.8 ± 9.1% and from 13.5 ± 3.1% to 17.2 ± 4.1%, respectively
Yidiz et al. (2018)[17]	RCT (N=30) n=15, training (32.8±7.4) n=15, control (27.8±8)	F: Once a day for 6weeks I: 10Rep/2-3Sets T: Non-mentioned T: Strengthening	VAS decreased and NDI: no difference between groups (F = 2.9, p = 0.1) For scapular kinematics: no different between groups at 30, 60, 90, and 120 °

Fig. 2 Summary of study characteristics and findings for reviewed studies about the scapular stabilization exercise