Yoga versus massage in the treatment of aromatase inhibitor-associated knee joint pain in breast cancer survivors: a randomized controlled trial

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BACKGROUND

Aromatase inhibitors (AIs) are standard adjuvant therapy for postmenopausal women with oestrogen receptor-positive, early-stage, and metastatic breast cancer. Although effective, the risk of falls due to AI-associated knee joint pain significantly increased. The aim of this study was to evaluate the therapeutic effects of yoga and massage on AI-associated knee joint pain.

METHODS

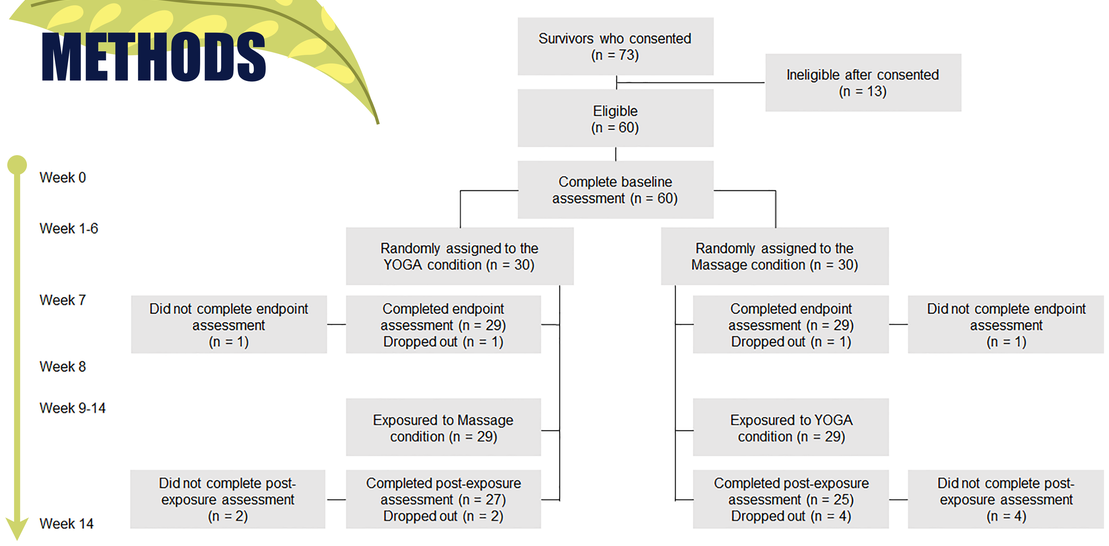


Fig 1. Flow chart This randomized controlled trial (RCT) compared a yoga intervention with a home-based massage intervention. Breast cancer survivors were randomly assigned to a 6-week yoga intervention-2-week rest-6-week massage exposure (Yoga first, n = 30) or a 6-week massage intervention-2-week rest-6-week yoga exposure (Massage first, n = 30). Questionnaires and blood samples were collected at baseline, one-week post-intervention, and one-week post-exposure.

RESULTS

Intervention effects on WOMAC pain scores

Table 1. a. Week 7 vs. baseline and week 14 vs. baseline in groups, student's t test. b. Week 14 vs. week 7 in groups, student's t test. c. Baseline, week 7 and week 14 between groups, student's t test.

Table 1 / Outcome		WOMAC		
		Baseline	Week 7	Week 14
Yoga first (Mean ± SD)		9.3 ± 2.8	4.2 ± 2.2	8.8 ± 3.1
Massage first (Mean ± SD)		9.7 ± 3.2	8.7 ± 4.2	3.6 ± 2.1
***p* value [a]**	Yoga First		1.211×10^{-10}	0.531
	Massage First		0.32	5.863×10^{-11}
***p* value [b]**	Yoga First			2.280×10^{-8}
	Massage First			1.168×10^{-6}
***p* value [c]**		0.606	3.681×10^{-6}	3.881×10^{-9}

Fig 2. Intervention effects on meridian energy (ME)

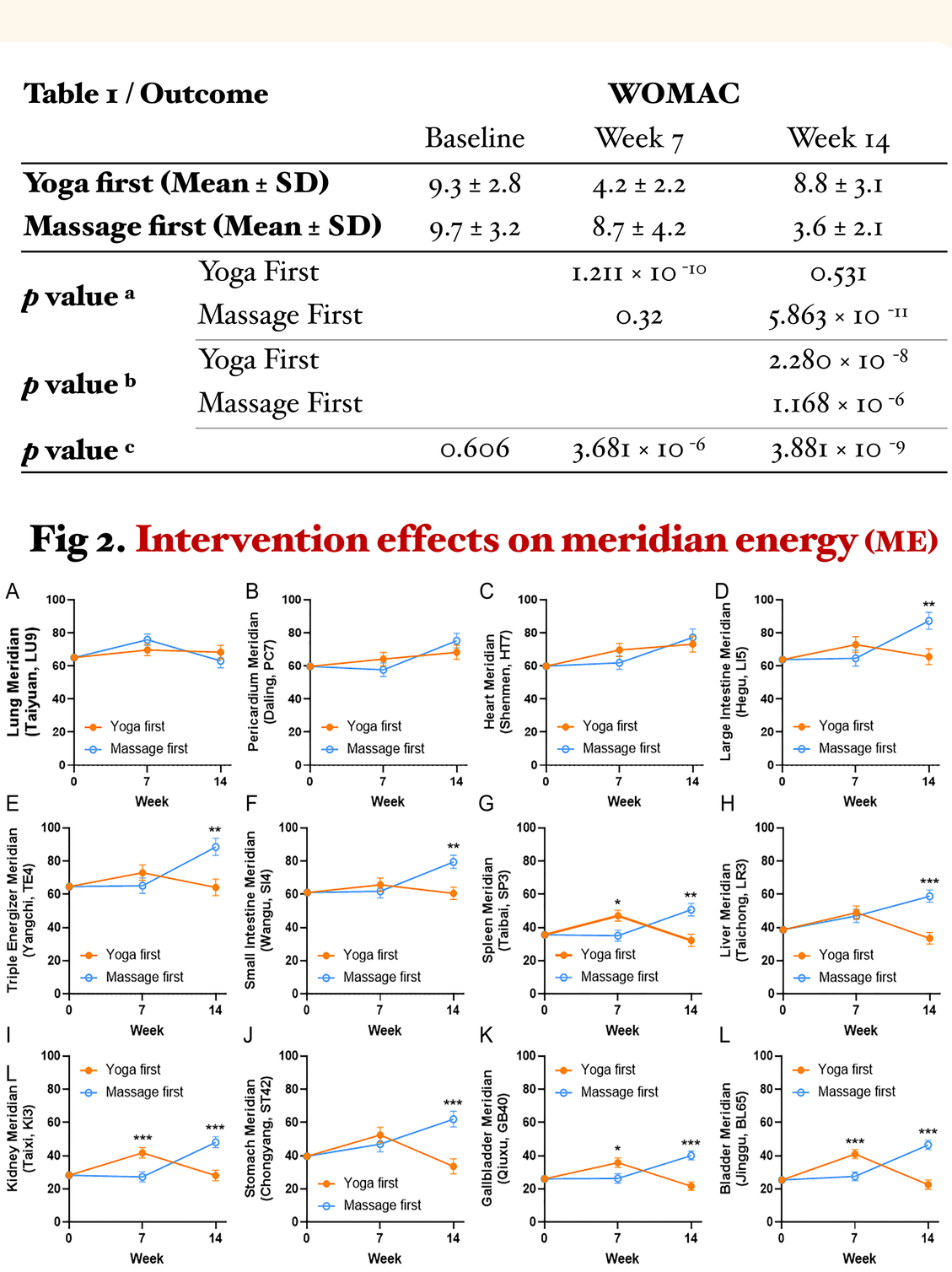
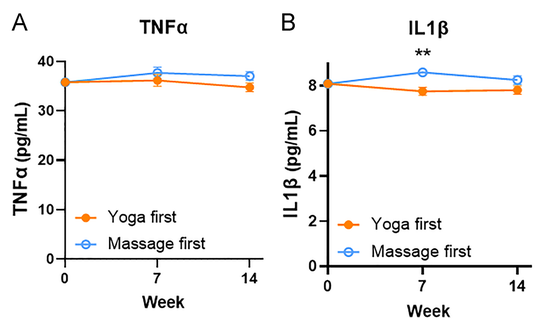


Fig 3. Intervention effects on inflammation



DISCUSSION: The current results show that yoga intervention is significantly superior to massage intervention to improve AI-associated knee joint pain, as evaluated by the WOMAC index score.

CONCLUSION

This study provides scientific evidence that yoga was more effective than massage for reducing AI-associated knee joint pain.

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