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A meta-analysis of the efficacy and safety of using oil massage to promote infant growth**Zhong Qingling**

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Background: In many areas of the world, especially in some continents like in Asia and Africa, infant oil massage is a traditional nursing practice. Though the effects of oil massage on infants were investigated in recent decades, the results were not consistent. Therefore, we performed a meta-analysis to provide evidence for nursing practice.

Objectives: To determine whether oil massage could promote the physical and neuro-behavioral growth of infants, as well as whether oil massage would be likely to lead to skin adverse reaction.

Design: A meta-analysis.

Methods: Relevant RCT or CCT studies were identified by searching the following English and Chinese electronic databases up to December 2014: Medline, PubMed, Ovid, Cochrane Library, China National Knowledge Internet (CNKI), WanFang Data and CQVIP. The quality assessment was critically conducted depending on Cochrane collaboration's tool, data were extracted by two reviewers independently and disagreement was resolved by consensus. Meta-analyses were conducted by RevMan 5.3. For continuous outcomes, mean differences and 95% CIs were estimated with the fixed-effect model. But if outcome has different unit, we calculated standardized mean difference (SMD), Risk Ratio (RR) and 95% CIs of the dichotomous outcome were estimated. The heterogeneity was tested by I² metric.

Results: In all, 625 articles were retrieved and 8 studies were eligible. Oil massage improved the infant weight [SMD=0.23, 95% CI (0.03-0.44), p=0.02], the effects are more obvious after followed up of 1-2 month. The infants who received oil massage intervention showed weight gain by 141.8 g [95% CI (115.11-168.49), p<0.00001] and weight gain velocity by 1.07 g/kg/day [95% CI (0.47-1.67), p<0.0005]. Oil massage also promoted the infant body length by 0.41 cm after follow-up [95% CI (0.08-0.74), p=0.02] and not had significant risk of adverse effects in infant skin. No significant differences yielded on the scores of Neuro-behavioral assessment scale and the head circumference.

Conclusions: Oil massage should be a safe and effective practice to improve the physical growth of infants and does not have bad effects on the skin. But whether oil massage is effective on infant neuro-behavioral development is still unclear, the core mechanism and standard process of oil massage still needs further study.

Relevance to Clinical Practice: Oil massage could yet be regarded as a kind of useful and harmless method for clinical nursing to solve the problem of neonatal care.

Biography

Zhong Qingling has been hailed as middle-aged excellent Teacher, outstanding Instructor of Master's degree thesis, the Leader of Provincial Quality Resource Sharing course and Baogang excellent Teacher. She has published more than 50 articles and edited more than 10 sets of textbooks.

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