

Advancing clinical trials of herbal medicine for obesity: A scoping review of methodologies

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ABSTRACT

Introduction: Global prevalence of obesity is high, estimated at 14% in 2019. Obesity clinical trials are often met with challenges in integrating lifestyle modifications and assessing long-term health outcomes. Conventional medicine-centric guidelines for clinical trials may overlook specific details essential for herbal interventions. This scoping review aimed to collate literature regarding anti-obesity clinical trials with herbal medicines (HM), map the methodology landscape and identify research gaps specifically for these trials. **Methods:** Systematic searches with predetermined keywords were conducted on MEDLINE, CENTRAL, and Embase databases. Eligible randomized controlled trials (RCTs) targeting all age groups with obesity, using HM interventions were included. **Results:** This review included 99 RCTs (participants aged 18-75). The most common HM interventions were single herbs (n=55) and herbal mixtures (n=40). These interventions were often combined with lifestyle modifications (n=58) and among those, few studies were conducted for more than 6 months (n=4) and included dietitian counselling as an integral component of the program. Three reported good treatment compliance rates of >85%, while about two-thirds had a dropout rate of <20%. Dropout rates were found to be not consistent across studies. Key outcomes assessed were a mix of biomedical and behavioural measurements. Short-term study designs were favoured, incorporating lifestyle advice without strict enforcement. Investigational product quality is an essential factor that must be considered for HM trials. **Conclusion:** This review highlights the multidimensional nature of herbal RCTs for obesity, emphasizing the importance of a multidisciplinary approach that integrates treatment interventions, lifestyle modifications, and expert guidance for effective management. **Keywords:** Scoping review, obesity, overweight, methodology, herbal medicine.