Cannabinoids for the treatment of chronic non-cancer pain: an overview of the evidence

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Introduction and Aims: There is substantial evidence for cannabinoids for chronic non-cancer pain (CNCP). The aim of this review is to examine both observational and randomised controlled trial evidence for cannabinoids in CNCP.

Design and Methods: We conducted a systematic review of MEDLINE, Embase, PsycINFO, CENTRAL and clinicaltrials.gov in July 2017. Meta-analysis was conducted in Revman 5.3 and Stata 15.0.

Results: 91 publications containing 104 studies were included (n = 9958 participants). People receiving cannabinoids had an increased likelihood of reporting a 30% reduction in pain (29.0% cannabinoids vs 25.9% placebo), with a number needed to treat to benefit (NNTB) of 24 (95%CI 15-61). No significant effect was found for 50% reduction in pain (18.2% cannabinoids vs. 14.4% placebo). People receiving cannabinoids also had a small but significantly greater reduction in overall pain intensity, equivalent to 3mm on a 100mm visual analogue scale greater than placebo. People receiving cannabinoids were more likely to experience adverse events, and to withdraw from treatment. There were no significant impacts upon physical or emotional functioning, and low-quality evidence of improved sleep and patient global impression of change.

Discussions and Conclusions: Evidence for effectiveness of cannabinoids in CNCP is limited. Effects suggest NNTB are high, with limited impact on other domains. It appears unlikely that cannabinoids are highly effective medicines for CNCP.

Implications for Practice or Policy: These findings have direct relevance to the Australian Therapeutic Goods Administration’s (TGA) Guidance for the use of medicinal cannabis in the treatment of chronic non-cancer pain in Australia.

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