

Prevailing Clinical Evidence on Medicinal Hemp (Cannabis Sativa L.)

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Abstract : A growing interest on therapeutic benefits of hemp (*Cannabis sativa* subsp. *sativa*) is evident in the pharmaceutical market, attributed to its lower levels of psychoactive constituent delta-9-tetrahydronnabidiol (THC). Deemed as a legal and safer alternative to its counterpart marijuana, the use of medicinal hemp is highly debatable as current scientific evidence on the efficacy for clinical use is yet to be established. This study was aimed to provide an overview of the current landscape of hemp research, through recent clinical findings specific to the pharmacological properties of the hemp plant and its derived compounds. A systematic search was conducted following the Preferred Reporting Items for Systematic Review and Meta-Analysis-ScR (PRISMA) checklist on electronic databases (MEDLINE, OVID, Cochrane Library Central, and Clinicaltrials.gov) for articles published from 2009 to 2019. With predetermined inclusion criteria, all human trials with hemp intervention were included. A total of 18 human trials were identified, investigating therapeutic effects on the neuronal, gastrointestinal, musculoskeletal and immune system, with sample sizes ranging from one to 194 subjects. Three randomised controlled trials showed hempseed pills (in Traditional Chinese Medicine formulation MaZiRenWan) consumption significantly improved spontaneous bowel movement in functional constipation. The use of commercial cannabidiol (CBD) sourced from hemp suggested benefits in cannabis dependence, epilepsy, and anxiety disorders. However, there was insufficient evidence to suggest analgesic or anxiolytic effects of hemp being equivalent to marijuana. All clinical trials reviewed varied in terms of test item formulation and standardisation, which made it challenging to confirm overall efficacy for a specific disease or condition. Published efficacy data on hemp are still at a preliminary level, with limited high quality clinical evidence for any specific therapeutic indication. With multiple variants of this plant having different phytochemical and bioactive compounds, future empirical research should focus on uniformity in experimental designs to further strengthen the notion of using medicinal hemp.

Keywords : cannabis, complementary medicine, hemp, herbal medicine.

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