Preclinical profile of bacopasides from Bacopa monnieri (BM) as an emerging class of therapeutics for management of chronic pains.

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Abstract
Chronic pains management costs billions of dollars in medical exchequer to the world population. Additionally, 77% of people with chronic pains also have a degree of medically treatable depression. Opioids have a narrower safety index due to their side effects associated with its tolerance, hyperalgesia and subsequent dependence. Likewise, non steroidal anti-inflammatory drugs and anticonvulsants, also have limited safety and tolerability profile in the management of chronic pains. Bacopa monnieri, a renowned ayurvedic medicine has a strong antidepressant effect and significant antinociceptive effect, which is comparable to the effect of morphine via adenosinergic, opioidergic, and adrenergic mechanisms. BM has been also reported to be effective in neuropathic pains. Additionally, it has a strong anti-inflammatory effect mediated via COX-2 inhibitory mechanism. Apart from its effect of augmenting morphine analgesia, BM also inhibits opioid-withdrawal induced hyperalgesia, and acquisition and expression of morphine tolerance. BM is reported to have a strong protective effect against toxic effects of opiates on major organs like brain, kidneys and heart. BM is well documented to be safe and well tolerated herbal therapy in multiple clinical trials including various age groups. This minireview evaluated the preclinical data that highlights potential of BM as a future candidate for clinical management of chronic pains.

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