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Plant-based Medicines for Anxiety Disorders, Part 2: A Review of Clinical Studies With Supporting Preclinical Evidence

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Abstract

Research in the area of herbal psychopharmacology has revealed a variety of promising medicines that may provide benefit in the treatment of general anxiety and specific anxiety disorders. However, a comprehensive review of plant-based anxiolytics has been absent to date. Thus, our aim was to provide a comprehensive narrative review of plant-based medicines that have clinical and/or preclinical evidence of anxiolytic activity. We present the article in two parts. In part one, we reviewed herbal medicines for which only preclinical investigations for anxiolytic activity have been performed. In this current article (part two), we review herbal medicines for which there have been both preclinical and clinical investigations of anxiolytic activity. A search of MEDLINE (PubMed), CINAHL, Scopus and the Cochrane Library databases was conducted (up to 28 October 2012) for English language papers using the search terms 'anxiety' OR 'anxiety disorder' OR 'generalized anxiety disorder' OR 'social phobia' OR 'post-traumatic stress disorder' OR 'panic disorder' OR 'agoraphobia' OR 'obsessive compulsive disorder' in combination with the search terms 'Herb*' OR 'Medicinal Plants' OR 'Botanical Medicine' OR 'Chinese herb*', in addition to individual herbal medicines. This search of the literature revealed 1,525 papers, of which 53 plants were included in the review (having at least one study using the whole plant extract). Of these plants, 21 had human clinical trial evidence (reviewed here in part two), with the other 32 having solely preclinical evidence (reviewed in part one). Support for efficacy was found for chronic use (i.e. greater than one day) of the following herbs in treating a range of anxiety disorders in human clinical trials: Piper methysticum, Matricaria recutita, Ginkgo biloba, Scutellaria lateriflora, Silybum marianum, Passiflora incarnata, Withania somniferum, Galphimia glauca, Centella asiatica, Rhodiola rosea, Echinacea spp., Melissa officinalis and Echium amoenum. For several of the plants studied, conclusions need to be tempered due to methodological issues such as small sample sizes, brief

intervention durations and non-replication. Current evidence does not support Hypericum perforatum or Valeriana spp. for any anxiety disorder. Acute anxiolytic activity was found for Centella asiatica, Salvia spp., Melissa officinalis, Passiflora incarnata and Citrus aurantium. Bacopa monnieri has shown anxiolytic effects in people with cognitive decline. The therapeutic application of psychotropic plant-based treatments for anxiety disorders is also discussed, specifically Psychotria viridis and Banisteriopsis caarti (ayahuasca), Psilocybe spp. and cannabidiol-enriched (low tetrahydrocannabinol (Δ(9)-THC)) Cannabis spp.

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