

## Passion Flower for Anxiety

Kerry Bone, BSc (hons), Dipl. Phyto.

An important, but underestimated Western herb for the management of anxiety is the vine of the medicinal species of passion flower (*Passiflora incarnata*). Its unusual name is not a reference to Earthly passions, but instead comes from the Christian symbolism (Christ's Passion) seen in the flower by the Spanish conquistadores when they first saw the herb growing in South America. This was later elaborated by the scholarly monk Jacomo Bosio, who maintained that the flowers contained a profound symbolism of Christ's final days on Earth.<sup>1</sup> For example, the five stamens were the number of wounds, the three pistil stigmas represented nails, and the 72 filaments indicated the number of thorns in the crown given to Jesus.

Despite this focus on the beautiful flower, the part of the plant used for therapy is the aerial part or the vine, as noted above. The [phytochemicals](#) found here that contribute to the anxiolytic activity are not fully understood, but they possibly include flavonoids, maltol and flavonoid-related molecules such as benzoflavone.<sup>2</sup> However, a recent study failed to find benzoflavone in passion flower harvested from three different regions.<sup>3</sup>

### Supporting Research

There are now several clinical trials that provide evidence supporting the traditional use of passion flower for anxiety symptoms. In a pilot, randomized, double-blind, controlled trial, passion flower extract was as efficacious as oxazepam (a benzodiazepine drug) for the management of generalized anxiety disorder. However, the passion flower treatment resulted in a lower incidence of impairment of job performance. The daily dosage of the undefined passion flower extract was 45 drops.<sup>4</sup>



A passion flower and valerian combination improved symptoms of insomnia in uncontrolled trials.<sup>5-6</sup> The side effects characteristic of benzodiazepine tranquilizers were not observed.<sup>6</sup> In a controlled trial with comparison against chlorpromazine (an antipsychotic drug), electroencephalographic recordings (EEG) showed sedative activity after six weeks of treatment with this herbal combination.<sup>5</sup> And in a randomized, double-blind, placebo-controlled study, a single dose of passion flower extract (equivalent to about 7 g of dried herb) demonstrated a calming effect in healthy female volunteers, as assessed by a self-rating scale for alertness.<sup>7</sup>

Passion flower has also been used to help with drug withdrawal symptoms. A randomized, double-blind, controlled, 14-day trial compared clonidine plus passion flower extract against clonidine plus placebo in the outpatient detoxification of opiate addicts. Both treatments were equally good at alleviating the physical symptoms of withdrawal, but the group receiving passion flower showed superiority over clonidine alone in terms of the management of mental symptoms.<sup>8</sup>

Many patients suffer from anxiety before surgery, but any pre-administered medication must be sufficiently strong without causing undue sedation or interacting with general anesthesia. One clinical study found that a single dose of passion flower prior to outpatient surgery reduced anxiety without increasing sedation.<sup>9</sup>

In the double-blind, randomized, placebo-controlled design, 60 patients received either 500 mg of passion flower herb as a tablet or a matching placebo as a premedication 90 minutes before surgery. A numerical rating scale of 1 to 10, with 10 being the worst possible anxiety, was used to assess anxiety

and sedation before and 10, 30, 60 and 90 minutes after premedication. Psychomotor function was assessed at arrival in the operating theatre and 30 and 90 minutes after tracheal extubation.

Anxiety scores were similar for both groups at baseline:  $4.6 \pm 1.7$  for the passion flower group and  $5.1 \pm 2.0$  for the placebo (control) group. After 90 minutes, these scores had changed to 0.97 for the herbal treatment versus 3.88 for control treatment, a significant difference ( $p < 0.001$ ). There were no significant differences between the groups in the level of sedation before surgery and recovery of function after surgery. Discharge times were also similar and no side effects were observed.

### Clinical Significance

This study provides useful information on a number of levels. Most significantly, it demonstrated that a single, relatively low dose of passion flower can act as an effective short-term anxiolytic without causing undue sedation. Hence, there is no risk with driving or operating machinery. The study also shows that herbal premedication can be a safe and beneficial option to manage the significant apprehension or anxiety that can precede general anesthesia and surgery. (Unfortunately, such a proposition would probably be viewed as too radical in most hospitals, at least at present.)

### Additional Evidence

This research was at least followed up by another group who examined the value of passion flower as an anxiolytic premedication before [spinal anesthesia](#).<sup>10</sup> In a randomized, double-blind, placebo-controlled trial, 60 patients ages 25-55 years who were scheduled for elective hernia repair under spinal anesthesia received either a single dose of passion flower (700 mg) or a placebo.

There was a small but statistically significant difference between the two groups for the increase in State Anxiety Inventory (STAI-S) score obtained just before spinal anesthesia when compared to the baseline. There was no statistically significant difference in psychomotor function from the baseline for either group. The authors concluded that oral preoperative administration of passion flower suppressed the increase in anxiety before spinal anesthesia without changing psychomotor function test results, sedation level or hemodynamics.

Finally, a clinical study presented as a poster at the European College of Neuropsychopharmacology Congress in Vienna (October 2007) found that a combination of St. John's wort (*Hypericum perforatum*) and passion flower was helpful for symptoms of depression with anxiety.<sup>11</sup> Each tablet in the combination contained 450 mg of [St. John's wort](#) extract (about 2.7 g of herb) and 350 mg of passion flower extract (about 1.4 g of herb), and was given at a dose of two tablets per day. In the trial, 162 patients received either the herbal tablets or a matching placebo for eight weeks using a randomized, double-blind design.

Herbal treatment resulted in a highly significant reduction in the Hamilton depression score in the mildly depressed patients ( $15.64 \pm 0.93$  to  $8.05 \pm 1.69$ ) versus an increase in depression score for placebo. Results were similar for anxiety scores, indicating the anxiety that often accompanies mild depression also responded to the herbal combination, no doubt due largely to the passion flower.

### The Take-Home

From all of the above, it can be concluded that doses of 2 mL to 5 mL per day of the 1:2 extract (5 mL

to 12.5 mL of 1:5 tincture) or 1.5 g to 2.5 g per day of the herb or extract in tablet or capsule form, will deliver clinically significant anxiolytic doses. Higher doses can be used in the short term.<sup>7</sup> I have found the combination of passion flower with valerian to be particularly useful, as per the early, uncontrolled clinical trials.

## References

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