



## Commentary

## Clinical application of single acupoint (HT7)

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HT7 is 7th acupoint of the heart meridian, which is located at the ulnar aspect at the end of the distal transverse crease of the wrist, between the flexor carpi ulnaris and the flexor digitorum superficialis.<sup>1</sup> Chinese name of HT7, *Shenmen*, means the “gate of spirit” which is linked to the traditional treatment for disorders such as amnesia, stupor, mania, insomnia, palpitations due to fright, irritability, and chest pain.<sup>2</sup> Recently, many animal studies have presented the therapeutic activities of single acupuncture using only HT7 treatment for especially psychological or neurological disorders.<sup>3,4</sup> Other studies also discovered the regulatory actions of HT7 acupuncture on GABA system and serotonin system in morphine addition and depression animal models.<sup>5,6</sup>

In general, the traditional acupuncture treatment chooses the multi-acupoints for even a symptom or single disorder.<sup>7</sup> If the therapeutic effects of single HT7 acupuncture in animal-based studies can be proved in clinical practices, the clinical usefulness of HT7 acupuncture is highly expected. In fact, one clinical study presented the comparable efficacy of single acupuncture at EX-B 8 (Shiqizhui) comparing to multi-acupoints for dysmenorrhea.<sup>8</sup> In order to provide its practical outline, this article extracted and built the clinical evidence for HT7acupuncture.

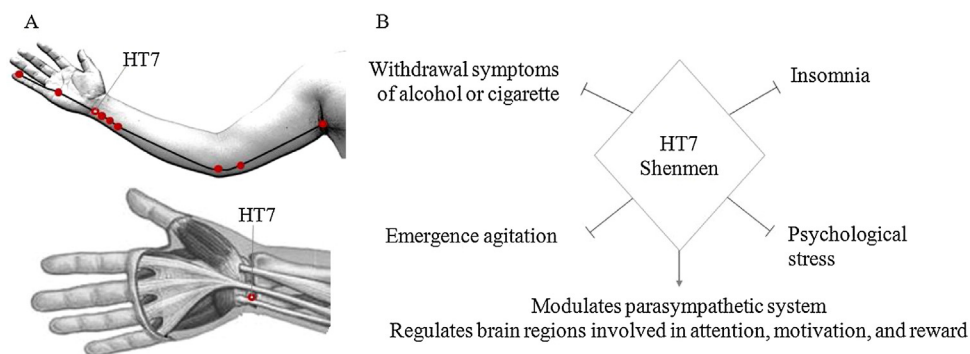
From Pubmed database survey, 12 clinical study-derived articles were reported for efficacy of single acupuncture at HT7 and for its related mechanisms. As shown in Fig. 1, the main target disorders included insomnia,<sup>9</sup> psychological stress,<sup>10</sup> emergence agitation<sup>11</sup> and alcohol or cigarette withdrawal symptoms.<sup>12,13</sup> These disorders all are broadly involved in problems of neuropsychiatric conditions that have received attention recently due to the increasing burden and prevalence of those disorders in modern society.<sup>14</sup>

On the other hand, neuropsychiatric disorders generally refer to disability of mental conditions originated from the nervous system. From the spectrum of neuropsychiatric disorders, anxiety, depression and sleeping disorders are most prevalent and they are known to be linked closely together.<sup>15</sup> These disorders are also well recognized to have positive relation with sensitivity of psychological stress and addiction.<sup>16</sup> From this point of view, the clinical evidences that single acupuncture treatment at HT7 can modulate the insomnia, stress, anxiety and withdrawal symptoms, are very impressive and potential clinically.

Besides animal-based studies, some groups partially explained the underlying mechanisms corresponding for those therapeutic effects of HT7 in clinical settings. One study reported the significantly enhanced activity of parasympathetic system after HT7 acupuncture using heart rate variability,<sup>17</sup> while others found the regulation of activity in brain specific regions from fMRI and electroencephalogram (EEG) analyses.<sup>18,19</sup> More studies are requiring to support and to explore the clinical efficacy of HT7 acupuncture on neuropsychiatric disorders. Moreover, well-designed clinical trials are necessary further to confirm its therapeutic effects and adequate procedure. Even two studies were conducted by same group; HT7 acupuncture at both sides was effective on emergence agitation in children but not effective by one side acupuncture.<sup>20</sup>

Many populations suffer from neuropsychiatric disorders, but pharmacological strategy has limitations due to low efficacy, adverse effects and high relapse rate after drug discontinues. Acupuncture is a typical non-pharmaceutical intervention used worldwide. This article hopefully will provide the concise information for clinical effectiveness of single acupuncture at HT7 on especially neuropsychiatric disorders.

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**Fig. 1.** Location of HT7 and its applications with clinical evidence. The heart meridian and location of HT7 acupoint (A), and summary for evidence-based clinical application of HT7 (B) are showed.

### Conflict of interest

The author declares no conflict of interest.

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### Ethical statement

This article does not involve any human subjects or animal experiment.

### Data availability

Data will be made available upon request.

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