

An Indispensible Part of our Toolkit: The Intradermal Needle

When most of us think of acupuncture, we think of needles with a long shaft, but we shouldn't forget that there are other highly-effective types of needles, too. One of those is the intradermal needle. It's easy to use, helps extend the effectiveness of acupuncture treatments by remaining in the patient's skin after the treatment, and is really an under-used but indispensable part of our toolkit.

In the Yellow Emperor's Classic, Master Chi Bo explains that there are nine different kinds of needles (Spiritual Axis, ch 1). He says, "The shaft of the filiform needle (Go Shin) is extremely thin like that of a mosquito's proboscis. It is inserted gently, with calmness of spirit. It should be inserted shallowly and retained in the skin for some time to nourish Zhen Qi. It is used to treat painful Bi syndrome." According to Chi Bo, shallow needling is used to treat pain and tonify the *qi*. It might be said that the intradermal needle has the same functions.

There are two varieties of intradermal needles: the straight intradermal needle and the press tack. The straight type was invented by Dr. Kobei Akabane in Japan, and the press tack was invented in China. It takes a little practice to apply the straight intradermal needles, but application of press tacks is both safe and easy.

Recently, I found a couple of interesting research results in a Japanese acupuncture publications. Both studies were done by Dr. Yasuhisa Kaneko and several other professors at the Tokyo Therapeutic Institute, using Seirin PYONEX press tacks.

Seirin Corporation carries 5 different lengths of PYONEX needles: 0.3mm, 0.6mm, 0.9mm, 1.2mm and 1.5mm, all with a gauge of 0.2mm (equal to a gauge of #3 in a Japanese needle and #36 in a Chinese needle).

One of the studies was on the effectiveness of press tacks on delayed-onset muscle soreness after triathlons. There were 149 subjects, both male and female, and 0.6mm PYONEX needles were used. The subjects were divided into two groups: press tack (79 athletes) and placebo (70 athletes). The placebo needles were also prepared by Seirin, and looked exactly like the PYONEX needles, but they had their needle tips cut off. In both groups, needles were placed on UB 23, UB 24, UB 25, UB 26 and UB 32. They were placed right before the race and removed right after. They compared the changes in muscle soreness before the race, immediately after the race and on the following day using a Visual Analog Scale (VAS) to evaluate any change. The study found the soreness had increased in both groups right after the race, but had reduced to the pre-race level in the press tack group by the next day. Soreness in the placebo group had also decreased by the next day, but not as significantly as in the press tack group. Some athletes in the press tack group said that they weren't nearly as sore as normal and felt less tired compared to previous races. The article went on to explain that the effect of the press tacks was due to the accelerated elimination of lactic acid. This study result might suggest

that placement of press tacks helps athletes recover more quickly from fatigue after races. The study group recommends the placement of press tacks not only during the races, but also during training sessions. By eliminating muscle pain more quickly, press tacks can keep the athletes in their best condition, thus improving the quality of training and preventing injury.

The other study was on the effect of press tacks on shoulder stiffness. There were 53 subjects, both men and women, and they were randomly divided into a press tack group (28 people) and a placebo group (25 people). For the press tack group, 0.6mm PYONEX needles were used and placebo needles were used for the placebo group. They were placed on points with muscle tightness on the patients' shoulders. In both groups, the maximum number of needles used was four per patient, and the needles were retained for three days.

They compared shoulder stiffness before needle placement and three days later, again using a Visual Analog Scale. After three days, only 43% (12/28) of the subjects in the press tack group still felt shoulder stiffness, compared to 92% (23/25) of subjects in the placebo group. This result showed that press tacks were indeed effective for shoulder stiffness, but it still left almost half of the press tack group subjects with stiffness. Because of this, the research team decided to further investigate the difference between the subjects who felt better and those who didn't. They found that press tacks were very helpful for simple shoulder stiffness, but not effective enough for shoulder stiffness due to pathological tissue/bone distortion (e.g. osteoarthritis). Considering this, Dr. Furuya suggested a new method of press tack application for these patients - a "three point application" method, in which an ashi point is surrounded by a triangle of three press tacks. This method was used in a further study of 11 subjects, four men and seven women. Nine of them had diagnoses of cervical spondylosis, one had a cervical herniated disc and one had thoracic outlet syndrome. All of the subjects received a regular acupuncture/moxibustion treatment first, and then three press tack needles were applied surrounding their more tender ashi point. In this study, the regular acupuncture/moxibustion treatment was effective in reducing shoulder stiffness from an average of 63 to 25 on a 100-point VAS scale, but the application of the three press tacks further reduced the stiffness to a rating of 9.5.

Dr. Jun Matsumoto of Gifu University reported the following case studies in the Japanese acupuncture magazine *Shinkyu* (Osaka Edition, Vol. 24. No. 4).

Case 1

A woman in her forties complaining of a feeling of heaviness in her lower back and lower legs. The feeling was usually worse when she was tired or standing for too long. Her pulse was weak on both KI positions and upon palpation of her meridians, KI3, UB 23 and SP 3 felt deficient. She was very stressed out and experiencing plum pit *qi*, had diminished appetite and frequently suffered from stomach aches and constipation. Dr. Matsumoto first treated her with regular filiform needles on KI 3 and UB 23, but the effects of the treatment didn't last as long as he had hoped. He then tried applying a press tack to UB 23, where he found deficiency, and not only did her discomfort disappear immediately, the effect lasted longer than it had using the filiform treatment.

Case 2

A teenage boy complaining of difficulty speaking, slow movement and reduced appetite, all of which started after he was in a car accident. He had trauma to multiple areas and was transferred to Dr. Matsumoto's hospital, where he received treatments in the ICU first and recovered to the point where he could walk using a walker 15 days after admittance. However, his neurological symptoms remained, so Dr. Matsumoto decided to treat him using acupuncture. Dr. Matsumoto needled Du 20, LI 4, ST 36,

KI 3, KI 7 and Yintang to nourish the KI, strengthen the brain and open the orifices. The patient showed some improvement after the acupuncture treatments, with his ability to write returning and his appetite showing marked improvement. Before he was discharged, Dr. Matsumoto applied thumb tacks to PC 6 and ST 40 with the hopes of continuing his improvement. When he came back to the hospital several days later, his speech had returned to near pre-accident levels and he was finding speaking much easier.

Case 3

A man in his thirties with an aversion to wind and cold, and a feeling of tiredness. He had been prone to catch colds easily since he was a boy. When he came in, he also had a slight headache, spontaneous sweating and shoulder stiffness, and his UB 13 and Lu 7 felt weak and moist from perspiration. Dr. Matsumoto applied a press tack needle to UB 13. The aversion to wind and shoulder stiffness diminished immediately and all other symptoms disappeared within 30 minutes. Now Dr. Matsumoto applies a thumb tack to his UB 13 point whenever the patient comes to see him to help him avoid catching other colds.

Dr. Matsumoto avoids use of press tack needles in the following cases:

1. The patient has an infectious disease: eg. Hepatitis C.
2. The patient is very sensitive to needle stimulation.
3. The patient has excessive sweating, and the press tack needle won't stick to the skin for long enough.
4. The patient doesn't follow the acupuncturist's instructions for proper use of the press tack needles (for example, the patient doesn't remove the needle at the instructed time).

Dr. Matsumoto has also found that patients doing chemotherapy tend to feel too much discomfort from the press tacks. He assumes that this is because of the sudden disturbance of *qi* and blood caused by the chemotherapy. Press tacks seem like an ingenious way to both enhance and extend the effectiveness of our treatments, and will likely be increasingly considered an indispensable tool in our arsenal of treatment modalities.

JULY 2012