REVIEW

Chinese Medicine and the Surgeon

Ping-chung Leung (梁秉中)\textsuperscript{1}, Sreedhar Biji\textsuperscript{2}, and Chung-kwong Yeung (杨重光)\textsuperscript{2}

\textbf{ABSTRACT} The surgeon aims at a direct, complete removal of the pathology. In spite of the modern advancements of imaging facilities and precision instrumentations, unsatisfactory results and recurrences are not uncommon. This paper provides a general review of the four specific areas in surgery that would benefit from Chinese medicine. Extensive searches were made on four surgical areas based on available English language journals, viz. low-back pain, chronic ulcers, renal calculi, and enuresis in children, in the past 10 years. The quoted communications are mainly related to clinical evidences, while a smaller number of crucial laboratory reports are also included. Low-back pain, a most frequent orthopaedic problem, would benefit from acupuncture treatment. Chronic leg ulcers could achieve better results of healing using herbal supplements. Problems of renal stones, besides the conventional methods of removal, could be further supplemented with herbal drinks that aim at prevention of recurrences. Enuresis in children, an untreatable common condition, may respond well to acupuncture. Surgeons should keep an open mind. In case of difficulties, they could seriously consider options of traditional treatment.

\textbf{KEYWORDS} Chinese medicine, back pain, nephrolithiasis, enuresis, chronic ulcer

Surgery is a precision craft. Although surgery originated from the war field where warriors tried to heal their wounds with crude means, and later in peaceful times barbers treated fingers and toes, nails, and ulcers, with centuries of more and more sophisticated development, its nature has thoroughly changed. The thorough understanding of anatomy has transformed surgical cuts into plane finding, atraumatic pursues for the removal of pathology. With the provision of modern imaging, preoperative planning has become more accurate, and the recent popular use of intra-operative minimally invasive approaches and computerized tomographically guided manoeuvers further facilitated the precision of both destructive and constructive parts of the surgery.

Today’s surgeons naturally would adopt an over-optimistic view on diseases and their treatment, with an assumption that complete removal of any pathology could be achieved with immediate good results. In reality, complete removal of pathology might be possible only under rare circumstances, and after surgery, residual problems and recurrences are not uncommon.

The intention of this review paper is to identify common areas in surgery that, in spite of modern treatment, problems persist. These could be the areas that responsible surgeons, apart from fulfilling their duty on surgical interventions, would start looking for alternative solutions, which in a Chinese community would mean very much Chinese medicine\textsuperscript{(1)}.

\textbf{ALTERNATIVE APPROACHES TO SOLVE SURGICAL PROBLEMS}

Since it is not possible to do a comprehensive review of how the surgeon could make use of Chinese medicine to solve some of his difficult problems, the authors would select from their personal experience, convincing areas that expectedly would illustrate the general situation. Two orthopaedic problems, one urology problem, and one paediatric problem will be discussed, which are chronic back pain, chronic ulcers, renal stones, and enuresis in children. Literature review concentrates only on English language journals so that more confidence could be expected from the non-Chinese readers.

\textbf{Chronic Back Pain}

Chronic low back pain is one of the most frequently experienced neuromuscular ailments in all communities. In Europe and America, 80% of
adults experience significant back pain during their life time\(^{(2)}\). While the majority of back pain episodes appear to be resolved within 6 weeks, it is estimated that 10\% to 20\% of affected adults develop symptoms of chronic lower back pain defined as persistent pain lasting longer than 3 months and occurring in at least 50\% of days\(^{(3)}\). The majority of chronic back pain patients do not have a diagnostic evidence of pathology that deserves specific treatment, such as special medication or surgery\(^{(4)}\).

Rehabilitation programs involve multiple disciplines, such as therapeutic exercises, physiotherapy, occupational therapy, and relaxation training, which are often combined with drug management. In spite of energetic rehabilitation training, only about 30\% to 40\% of industrial patients return to work\(^{(4)}\). Electrical stimulation for control of pain is often employed, and some reports endorse the value of such practices such as transcutaneous electrical nerve stimulation (TENS)\(^{(5)}\).

In the 1980s, there were more studies reporting on the efficacy of electrical stimulation, either with TENS or acupuncture. Coan\(^{(6)}\) reported that patients receiving a minimal of eight acupuncture treatments experienced less pain at a 40-week follow-up than those who dropped out after only one to two treatments. Lehmann, et al\(^{(7)}\) conducted a trial to assess the efficacy of TENS and electro-acupuncture (EAP) in the rehabilitation of chronic back pain patients. Fifty-four patients treated in a 3-week inpatient rehabilitation program were randomly assigned to and accepted treatment with EAP TENS (low intensity transcutaneous nerve stimulation) and TENS dead-battery (placebo). Outcome measures included estimates of pain (on a Visual Analogue Scale) and disability by both physician and patient, physical measures of trunk strength and range of motion of the spine, as well as the patient's perceptions of the relative contribution of the education, exercise training, and the electrical stimulation. Analyses of variance were utilized to determine effects of treatment (EAP, TENS, and placebo) across time (admission, discharge, and return) for the outcome measures. There were no significant differences between treatment groups with respect to their overall rehabilitation. All three treatment groups ranked the contribution of the education as being greater than the electrical stimulation. However, the EAP group consistently demonstrated greater improvement on the outcome measures than the other treatment groups. For the Visual Analogue Scale measure of average pain, there was a statistical trend at the return visit, suggesting that the acupuncture group was experiencing less pain.

A recent Cochrane review of 35 trials, evaluating the effectiveness of acupuncture for treatment of non-specific low-back pain and dry-needling for myofascial pain syndrome in the low-back region compared against no treatment, sham therapies, and the addition of acupuncture to other therapies, provided good evidence on the effectiveness of acupuncture for chronic low-back pain\(^{(8)}\). The results suggested that acupuncture is more effective for pain relief and functional improvement compared to no treatment and sham therapies during follow-up. However, acupuncture was not more effective than other conventional and "alternative" treatments when comparing its effectiveness with other conventional treatments. The evidence suggested that acupuncture is more useful for pain relief and functional improvement when used in conjunction with other conventional therapies than when comparing the effectiveness of conventional therapies alone. The reviewers concluded that acupuncture may be useful as either a unique therapy for chronic low-back pain or an adjunct therapy to other conventional treatments.

In conclusion, although the effect of acupuncture on pain control is nothing like the use of analgesics that bring immediate, although short-term relief, it has great practical value as an alternative for chronic persistent pain\(^{(9-12)}\). The mechanism of action of acupuncture is yet unclear. Recent studies using functional MRI indicated that the functional activities in specific regions of the brain could be mapped out during procedures of acupuncture\(^{(13)}\). With further maturation of the basic research trying to explain this ancient art of healing, acupuncture is expected to become even more popular in time. Acupuncture has been the most popular form of alternative treatment in modern hospitals and clinics, especially among pain teams\(^{(14)}\). For the surgeon, it will be to his disadvantage if he does not realize the potential value of acupuncture for his patients suffering from resistant, chronic pain.