Toothache - A Case Study
by Damian Carey

CONTENTS

Introduction 1
Case History 1
Oriental Medicine Diagnosis, Aetiology and Pathogenesis 1
Oriental Medicine Treatment 2
Western Medicine Aetiology and Pathogenesis 3
Western Medicine Research 3
Oriental Medicine Research 4
Discussion and Conclusion 4
References 5
Introduction
Toothache has accompanied humanity throughout its history and is referred to in the most ancient medical texts. (Cochrane, 2005) Modern dentistry practices are well able to manage toothache, yet traditional therapists can still be called upon to provide emergency pain relief.

Case History
Michelle, a 35 year old woman, had received intermittent acupuncture over nine months prior to this current occasion. Her initial presentation was abdominal pain, bloating and wind with headaches. On one previous occasion she reported a mild toothache.

Presenting Complaint
Acute toothache

Associated Problems
Headaches, abdominal pain and bloating

Pulse
Rapid, full; deficient in the Kidney Yin and Spleen positions

Tongue
Congested, yellow coat

Abdomen
Tenderness at CV 12 and ST 25

General Health
Good. Michelle had made much progress with her digestive dysfunction, but still had occasional acupuncture treatments for maintenance. Michelle normally presented with a deficient Kidney and Spleen pulse.

Family History
Not known

Previous Medical Diagnosis or Treatment
None

Oriental Medicine Diagnosis, Aetiology and Pathogenesis
Diagnosis
Heat in the Stomach and Intestines with exogenous Wind and a background of Kidney and Spleen deficiency.

Aetiology and Pathogenesis
If the Spleen’s function of transformation of food is weak (manifesting, in this case, as abdominal pain with bloating and intestinal wind) this will result in incomplete digestion and therefore the accumulation of turbid fluid (Phlegm/Damp) in the intestines. This leads to the disruption of the flow of Yang Qi which accumulates in the intestines as Heat. (Flaws, 2002)
Both the Stomach and the Large Intestine Channels pass through the teeth. When Heat accumulates in the Stomach and Intestines due to 1) overeating, 2) consumption of Heat producing foods (e.g., spices, red meat, coffee and alcohol), or 3) simply weak digestion from inherent Spleen Qi deficiency this Heat can rise to affect the extremities of the channels in the head and face. (Maciocia, 1994)

Kidney Yin deficiency can induce a toothache on its own, via empty Heat rising (also known as Water fails to control Fire). The Kidney also rules the bones and teeth. (Xinnong, 1980)

The presence of Kidney Yin deficiency in this case, confirmed by occasional night sweats, adds complexity to the pathogenesis. Yet Michelle’s tongue was pale and slightly swollen, rather than red, therefore Kidney deficiency was secondary to Spleen deficiency leading to Qi and Blood being insufficient to nourish Kidney. Wei Qi was also consequenty deficient, leaving the patient susceptible to invasion by exogenous pathogenic factors. The weather at the time was indeed cold and windy and Michelle was sensitive to the cold, so the Heat in Stomach and Intestines accumulating in the face was exacerbated by Wind invading the channels, resulting in an intensification of pain.

Analysis of Signs and Symptoms

<table>
<thead>
<tr>
<th>Sign</th>
<th>Indication</th>
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<tbody>
<tr>
<td>congested tongue coat</td>
<td>Phlegm/Damp from Spleen Qi deficiency</td>
</tr>
<tr>
<td>yellow tongue coat</td>
<td>Heat in Stomach</td>
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<tr>
<td>rapid pulse</td>
<td>Heat</td>
</tr>
<tr>
<td>full pulse</td>
<td>Exogenous Pathogenic Factor (Wind)</td>
</tr>
<tr>
<td>abdominal pain, bloating and wind</td>
<td>Spleen deficiency</td>
</tr>
<tr>
<td>localised pain in the upper teeth</td>
<td>Heat in the Large Intestine</td>
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<tr>
<td>sensitivity to cold</td>
<td>Wei Qi deficiency</td>
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Oriental Medicine Treatment

Treatement Principle

Clear Heat from the Stomach and intestines; subdue Wind

Acupuncture Points and Methodology

The severity of pain demanded immediate attention to clearing Yangming Heat and subduing Wind. Needles were used unilaterally with local needles applied to the right side of the face, Large Intestine command points needled on the left (because of the cross over of the channel at the upper lip), and Stomach command points needled on the right.

- Hegu, Quchi & Neiting (Large Intestine 4 & 11; Stomach 44) were needled with strong reduction to clear Heat from the Stomach and Intestines. These needles were retained for 15 minutes and then the reduction method was repeated.
- Cups were applied to Zhongwan (CV 12) and Tianshu (St 25) to clear Heat from the Stomach and Intestines.
- Local points were added at the site of the pain, namely, Yingxiang (Large Intestine 20) and a single needle stitched between Xiaguan (Stomach 7) and Quanliiao (Small Intestine 18). These points were extremely tender and neutral method was used.
- Fengchi (Gall Bladder 20) was used bilaterally to subdue Wind.
Herbal Medicine
The patient was prescribed ten pills every two hours of the Patent Herbal Formula Huang Liang Jie Du Wan. This formula has the effect of clearing Toxic Heat from all three jiaos, purging Fire and cooling Blood. (Maclean & Taylor, 2003)

Lifestyle, Dietary and Exercise Advice
The patient was advised to keep food intake to a minimum until the crisis had passed, avoiding meat, spices, tea, coffee and alcohol.

Assessment of Outcomes
This single treatment resulted in an immediate and profound relief of pain. On follow up, Michelle reported this effect lasted for 48 hours at which point she received professional dental treatment.

Western Medicine Aetiology and Pathogenesis
Toothache can result from many factors, including non-dental. Toothache can arise from inflammation or ulceration of the gums or from cracked teeth, but the most common cause of toothache is pulpitis - inflammation of the pulp of the tooth. If left untreated, the pulp dies and becomes infected, leading to the formation of a dental abscess. The pain from a dental abscess tends to be in response to pressure on the tooth, and is throbbing and continuous. Toothache can also arise from trauma to the face and/or teeth or as a direct result of debris trapped between the teeth and/or gums leading to inflammation of the gums and nerves. (Grinsted, 2005)

Irritation of the pulp and gums following dental treatment can itself lead to toothache. Another cause of toothache is over-vigorous brushing leading to recession and damage of gums. (Grinsted, 2005)

Non-dental causes of toothache include sinusitis, temporomandibular joint dysfunction and angina.

Research
Numerous studies and reviews on the use of acupuncture in dental pain have been conducted by both Western Medical and Oriental researchers. Overall there is abundant evidence for the efficacy of acupuncture in modulating dental pain.

In a systemic review of studies on the use of acupuncture to control dental pain, ten out of sixteen studies suggested that acupuncture was more effective than control treatments. “Acupuncture analgesia has been demonstrated in controlled laboratory studies to produce greater analgesia than appropriate placebos.” (Ernst & Pittler, 1998)

“Acupuncture could supplement conventional treatment modalities. Its value in the treatment of temporomandibular dysfunction syndrome and facial pain has been well documented and supported by randomised controlled trials. (Rosted, 2000)

Many ... acupuncture points on the face, according to classic acupuncture textbooks, can be used to treat facial pain, paralysis, and toothache. When performed properly, acupuncture can be very effective for relief of dental pain. (Lu, 2003)

The mechanism of acupuncture has been hypothesized as counter-irritation analgesia. The brief, intense stimulation of afferent nerve fibres by means of an acupuncture needle to modulates pain transmission in a feedback loop mechanism, activating both opioid and non-opioid systems. (Ernst & Pittler, 1998)
Discussion of Oriental Medicine Theory

The teeth are located at the beginning of the alimentary canal and, according to the channel theory of Oriental Medicine, they are directly associated with the gastro-intestinal system, as evidenced by their position at the extremities of the Stomach and Large Intestine channels. Zang Fu theory gives a rationale to the sensitivity of the teeth to Heat in the Stomach and intestines.

Tooth pain, like pain anywhere in the body, is a symptom, a reflection of a wider pattern of disharmony which can be effectively treated by addressing that disharmony. Even though local points of tenderness were used in the described treatment, it was the systemic points, in particular the reduction technique applied to Hegu, Quchi and Neiting, which were the main drivers of the treatment.

In addition to Heat in the Stomach and Intestines and pathogenic Wind, both of which are evident in the case described in this paper, toothache can arise as a result of Kidney deficiency, associated with Empty Heat. This reflects Kidney’s rulership of the bones and teeth. A Kidney deficiency toothache is a dull ache that comes and goes, rather than the acute, severe pain described in this case. This is not to say that the underlying aetiology must be one or the other. The nature of the Oriental Medicine medical framework allows for the simultaneous presence of several different patterns, and indeed it could be argued that all three patterns are evident here.

Discussion and Conclusion

Professional Dentistry is unsurpassed in its ability to comprehensively manage all aspects of dental care including infection, tooth decay and pain. Yet there are occasions when the broader approach of Oriental Medicine can provide good relief of pain and possibly nullify the need for invasive dental surgery.

The obvious potential ethical dilemma here is the law that forbids the practice of dentistry without a licence. However, the peripheral techniques of acupuncture practice described in this paper would fall within the safe side of this law as they do not involve direct manipulation of the teeth or surgical invasion of the gums. Furthermore, no one who has ever experienced severe toothache would begrudge the temporary relief of pain provided by a traditional therapist.

The author has vivid memories of experiencing a severe toothache with extreme sensitivity to heat. Described by a dentist as an abscess, this toothache demanded, during one particularly distressing night, the constant ingestion of icy cold water to provide any semblance of tolerance to the severity of the pain. But rather than going down the path of a root canal procedure, recommended by the dentist, this situation was resolved, over a period of ten days, with acupuncture treatments and cold packs applied to the stomach. The tooth has never given any trouble in the fourteen years since then.

This raises the question: how many teeth are extracted unnecessarily, when a wholistic approach might have given effective results?
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