

# Acupuncture appears to be a rapidly effective treatment for costochondritis

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## Background

To my knowledge, this is the first case series of costochondritis treated by acupuncture. Eight cases are presented, the majority being seen in primary care.

Costochondritis is a debilitating condition characterised by severe anterior or lateral chest pain, associated with tenderness of the second to fifth costochondral (CC) joints. Tietze's syndrome is a rare variant with swelling of CC joints. Shock and dyspnoea can occur, mimicking cardiac pain or upper abdominal problems. I had noticed that this condition seemed to respond particularly well to acupuncture.<sup>1</sup>

## Treatment

Patients with persistent costochondritis, referred from general practice or rheumatology clinics, were offered acupuncture. Their notes were reviewed for investigations, analgesia and duration of symptoms. Patients with signs and symptoms of thoracic pain were excluded.

For the acupuncture, 0.25 mm × 25 mm and 0.25 mm × 30 mm needles were used with a silicon coating and guide tube to help prevent painful insertion. An infrared lamp with a

mineral plate ('Bio lamp') was used, as in Chinese hospitals. Electroacupuncture (EA) was added in four patients as improvement was insufficient. The first two treatments were within a week, followed by weekly treatments. Acupuncture was administered at local tender/trigger points on the chest wall and distal traditional acupuncture point locations PC6 and LI4. Others used were CV17, SI6, GB34, GB39, SP6 and ST36, stimulation at which is believed to promote homeostasis.

## Data collection

A pre-treatment visual analogue scale (VAS) was filled in for day and night pain, where 10 was 'worst pain imaginable'. All patients were advised that further acupuncture was available for recurrence(s), with three patients availing themselves of this (after 11, 9 and 3 months, respectively) (Table 1).

## Findings

There were eight patients, with a mean age of 41.9 years (range = 25–65). The duration of chest pain had a mean of 12.1 months (range = 0.13–60). The median number of acupuncture sessions needed was 4 (range = 3–8) and for a recurrence 2 (range = 1–4).

The attacks of severe chest pain rapidly improved, some after only one or two treatments. Patients with a recurrence also improved. No further treatments were needed at follow-up. Average improvement in the day was 89% and at night was 85%. Three patients with recurrences improved by 11% in the day and 72% at night. Use of analgesic medication (in six patients) rapidly reduced after one to three

sessions. All patients continued treatment until their pain had stabilised. There were no adverse events. There appeared to be no direct link between duration of symptoms and number of treatments needed.

All patients had a delayed diagnosis of costochondritis causing great distress, with several emergency ambulances called. Inappropriate investigations were carried out including an angiogram.

## Comment

All the patients in this series were female, although the quoted female:male ratio is 7:3. One patient had ankylosing spondylitis and another systemic lupus erythematosus (although she attributed her pain to a bout of laughter). Costochondritis can affect up to one-third of patients attending emergency departments with atypical chest pain,<sup>2</sup> and 1%–3% of patients in primary care.<sup>3</sup> Tenderness on palpation of the chest wall makes the diagnosis, although a small percentage may still be due to cardiac problems. Differential diagnoses include acute coronary syndromes, pancreatitis, pulmonary embolism, pericarditis, pleuritis and neoplasia.

The pathogenesis is unclear, but costochondritis can follow lower respiratory infection, chest wall trauma, extreme coughing, sneezing or laughter, fibromyalgia, inflammatory joint disease or possible microtrauma from costovertebral dysfunction. Most cases resolve with analgesia, anti-inflammatory drugs and physiotherapy. Approximately 30% of cases persist beyond a year and may need steroid injections and sometimes surgery. There have been occasional reports of acupuncture for

**Table 1.** Audit of acupuncture treatment.

Patient	Age (years)	Duration of problem	Number of treatments	Initial VAS score		Final VAS score	
				Day	Night	Day	Night
1	37	5 months	4	10	10	0	0
2	26	18 months	8 (1 EA)	5.5	7.5	0	2
3	65	3 weeks	5 (+EA)	7	9	1	1
4	58	4 days	4	9	7	2	2
5	62	10 weeks	7 (+EA)	6	8	0	2
6	34	6 weeks	4	4	7	2	2
7	28	9 months	3	1	4	0	0
8	25	5 years	3	8	7	0	0
Recurrence of pain							
3	65	1 week	4 (+EA)	8	8	1	2
6	34	5 weeks	2	2	8	2	2
7	28	2 weeks	1	1	3	1	1

EA: electroacupuncture; VAS: visual analogue scale (0–10).

costochondritis, integrated with conventional medicine.<sup>4,5</sup>

### Conclusion

This case series highlights the fact that acupuncture seems to be a safe and effective treatment for costochondritis, with further research and more access needed for this therapeutic modality.

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### Patient consent

Consent was obtained from patients for publication of a case series and any accompanying images.

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