



Linköping University  
FACULTY OF HEALTH SCIENCES



# Invasive acupuncture for radiotherapy-induced nausea and vomiting is not more effective than placebo acupuncture

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## Conclusion

This large, randomized study shows that invasive manual acupuncture not was more effective than sham in reducing nausea or vomiting in cancer patients receiving radiotherapy over pelvic or abdominal fields. Nearly all of the patients treated with acupuncture and sham thought that the treatment had been effective to reduce nausea. Approximately 90 percent of the patients in both the acupuncture group and the sham group were interested in receiving the same treatment again, if relevant.

## Introduction

Acupuncture has been used for thousands of years but its role in modern health care remains to be defined through scientific identification of beneficial and harmful effects. For radiotherapy induced nausea, acupuncture is still an unexplored treatment. Nausea is experienced by approximately 60 percent of patients receiving radiotherapy treatment over pelvic or abdominal fields. The incidence was 63% in a recently performed study in Sweden. To investigate whether acupuncture reduces nausea caused by radiotherapy in a patient group with a >50% risk of experiencing the symptoms (abdominal or pelvic region).

## Methods

237 patients were randomized to invasive manual acupuncture in the antiemetic point PC6 or sham, with a telescopic non-penetrating placebo needle (Park sham device) at a non-acupuncture point for 30 minutes.

Patients were over 18 years with gynaecologic-, anal-, rectal-, colon-, ventricel-, pancreas- or testicular tumours.

The patients were treated two to three times per week during the entire radiotherapy-period (median 5 weeks).

Data was collected in patient diaries and questionnaires during the entire treatment period as well as 2 and 4 weeks after radiotherapy.

## Results

Of 215 evaluable patients, 110 received acupuncture and 105 sham. Twenty patients interrupted the study and two patients died, leaving 193 patients (90 percent) completing the whole treatment period. The treatment arms were balanced, without any statistical significant differences regarding characteristics of the patients.

## Results cont.

### Incidence of nausea

In the acupuncture group, 68% experienced nausea for a mean number of 19 days. In the sham group, 61% experienced nausea for a mean number of 17 days. Figure 1 shows the mean number of days reported each week. The mean weekly proportion of patients experiencing nausea was 37% in the acupuncture group and 31% in the sham group.

### Nausea intensity

Figure 2 shows that the nausea intensity was similar in both groups. 19% of the nausea days in the acupuncture group and 15% of the nausea days in the sham group was graded as mild or moderate or severe. Nausea intensity was mild in 74 percent of the nausea days in the acupuncture group and in 80 percent of the nausea days in the sham group.

### Vomiting

Vomiting was experienced by 24% in the acupuncture group and 28% in the sham group.

### Concomitant chemotherapy

Fifty eight patients received radiotherapy combined with chemotherapy. Of those, 23 (82%) in the acupuncture group and 24 (80%) in the sham group experienced nausea, for a mean number of 19 and 13 days, respectively.

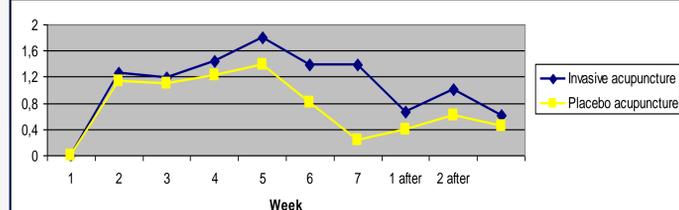
### Satisfaction with treatment

Figure 3 shows that both groups had positive attitudes to the antiemetic effect of the treatment they received and a majority stated that they would be much or moderately interested in receiving the same treatment again.

thought they had received treatment with penetrating needles.

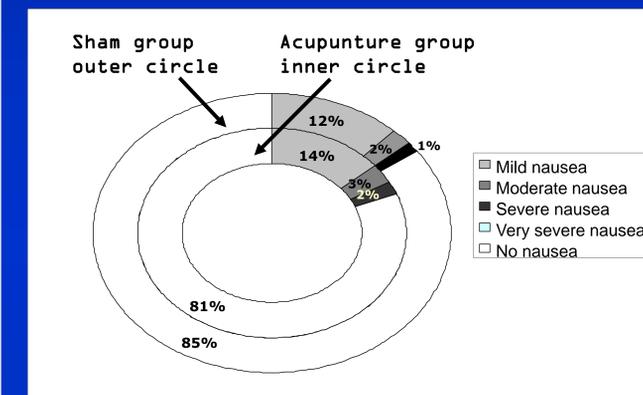
**Future research.** In the current study, the mean weekly proportion of patients experiencing nausea was 37% in the acupuncture group and 31% in the sham group. The weekly prevalence in our previous study covering a similar patient group was 63%. The more than 20% difference in weekly prevalence raises questions regarding the placebo effect and warrants further research.

Figure 1  
Days with nausea



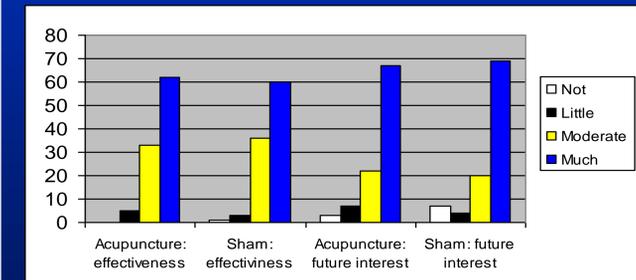
Mean number of days with nausea per week during and the two weeks after radiotherapy

Figure 2  
Nausea intensity



The proportion (%) of days of the radiotherapy period with different intensities of nausea in the acupuncture group and in the sham group

Figure 3  
Satisfaction with treatment



Attitudes to the antiemetic effect and the interest to receive the same needling again in the future, % of n (n = 95 in each group)

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References: Park J et al. *Acupunct Med*, 1999; 17(2): 110-2  
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Ezzo J et al. *J Clin Oncol*, 2005; 23(28):7188-98

thought they had received treatment with penetrating needles. Sussanne Börjeson:



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