Neurolytic celiac plexus block for treatment of cancer pain: a meta-analysis
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Authors' objectives
To quantitatively assess the safety and efficacy of neurolytic celiac plexus block (NCPB) for cancer-related pain.

Searching
BRS Colleague and DOCLINE (National Library of Medicine) were searched from 1966 to mid-1993 using the search terms 'celiac', 'neoplasms' and 'pain'. Only full length reports published in the English language were selected. Reference lists of retrieved articles were examined for further citations.

Study selection
Study designs of evaluations included in the review
Randomised controlled trials (RCTs), non-randomised controlled trials, uncontrolled trials and surveys were all screened for inclusion.

Specific interventions included in the review
NCPB.

Participants included in the review
Patients with malignant pain from pancreatic and other intra-abdominal cancers were included.

Outcomes assessed in the review
The study results were classified into three major categories of NCPB relief: complete, partial and minimal/no pain relief. These results were further categorised as acute (up to 2 weeks) or long-term (2 or more weeks). The long-term effect, where possible, was divided according to period of time from NCPB (within 3 months versus beyond 3 months, and also up to time of death).

How were decisions on the relevance of primary studies made?
The authors do not state how the papers were selected for the review, or how many of the authors performed the selection. Only studies with results that could be classified into the three main outcome categories, and specified the time frame at which efficacy was assessed, were included in the efficacy analysis.

Assessment of study quality
Validity was assessed by trial design. The authors do not state how the papers were assessed for validity, or how many of the authors performed the validity assessment.

Data extraction
The authors do not state how the data were extracted for the review, or how many of the authors performed the data extraction.

Methods of synthesis
How were the studies combined?
Combinable efficacy and safety data from the non-randomised controlled trial and the uncontrolled trials were summed separately from that of the RCTs. Pain relief was analysed according to duration of follow-up and also type of radiological guidance.

Where appropriate a random-effects model (see Other Publications of Related Interest) was used to determine weighted
averages of results and 95% confidence intervals (CIs).

How were differences between studies investigated?
The RCTs were analysed separately from other trials.

**Results of the review**
Twenty-four studies were included (n=1,145): 2 RCTs (n=71), 1 non-randomised controlled trial (n=21) and 21 uncontrolled retrospective trials (n=1,053).

Short-term analgesic efficacy was extracted from 18 uncontrolled papers (n=989). 89% of patients reported partial or complete pain relief during the first 2 weeks after NCPB. Long-term follow-up of patients (n=273), up to and beyond 3 months, revealed continued benefit in approximately 90% of patients alive at 3 months and in 70-90% until death, even if beyond 3 months post-NCPB.

In the single RCT, which provided information on the short-term efficacy of NCPB in 10 patients with pancreatic cancer, all patients reported partial or complete pain relief 2 weeks later. Longer-term (3-10 weeks) partial relief was reported in 7 cases and minimal relief in 3 cases. The second RCT demonstrated short-term partial or complete pancreatic pain relief in 70-80% of the patients, which lasted beyond 3 months in 60-75% of the patients.

Short-term outcomes show a high rate (86-96%) of successful NCPB regardless of the radiological techniques used.

The most common adverse effects were transient including local pain, diarrhoea and hypotension.

**Authors’ conclusions**
The present analysis suggests that NCPB is likely to have long-term analgesic efficacy for pancreatic and other types of intra-abdominal cancer. Adverse effects are common but transient. Further RCTs are necessary to compare NCPB to other analgesic treatments, such as systemic or spinal delivery of opioids, and to evaluate whether it may be appropriate to use it at the first appearance of pain with intra-abdominal malignancy.

**CRD commentary**
The literature search is limited to English language articles only. Insufficient data is given on primary studies and no validity assessment is reported. There are slight discrepancies between the data reported in Tables 4 and 5 and those in the text.

**Bibliographic details**

**PubMedID**
7818115

**Original Paper URL**
http://www.anesthesia-analgesia.org

**Other publications of related interest**
MeSH
Celiac Plexus; Humans; Neoplasms /complications; Nerve Block /adverse effects /methods; Pain Management; Pancreatic Neoplasms /complications; Radiography, Interventional; Treatment Outcome; Ultrasonography, Interventional

AccessionNumber
11995000978

Date bibliographic record published
31/01/1997

Date abstract record published
31/01/1997

Record Status
This is a critical abstract of a systematic review that meets the criteria for inclusion on DARE. Each critical abstract contains a brief summary of the review methods, results and conclusions followed by a detailed critical assessment on the reliability of the review and the conclusions drawn.