The WHO analgesic ladder for cancer pain management: stepping up the quality of its evaluation

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Authors' objectives
To evaluate the evidence available on the effectiveness of the World Health Organization (WHO) analgesic ladder as a tool for cancer pain management.

Searching
PARED (a database of analgesic trials in pain research) 1950-1990 was searched for the years 1982-1990. MEDLINE was searched from January 1982 to March 1995 using the following MeSH terms: 'World Health Organization', 'neoplasms', 'pain', 'analgesia', 'analgesics' and using the following textwords: 'cancer', 'pain', 'analgesia', 'analgesia'. Reference lists of relevant articles were also searched for additional references. A number of publications were searched manually, and letters were sent to authors of studies that were presented at scientific meetings for which no publications could be found.

Study selection
Study designs of evaluations included in the review
No restrictions were made on the study design of trials included in the review. All studies identified were case series (both prospective and retrospective).

Studies had to provide information on the instruments used to evaluate analgesia, and data to calculate the proportion of patients achieving adequate analgesia.

Specific interventions included in the review
WHO analgesic ladder for cancer pain management.

Participants included in the review
Patients receiving cancer pain treatment according to the steps and principles recommended in the original WHO analgesic ladder.

Outcomes assessed in the review
The percentage of patients receiving adequate analgesia. Analgesia was defined to be adequate if pain relief had been measured and patients had reported it to be adequate, satisfactory, acceptable, good or complete, or if it had been given more than 70% of the maximum score on a visual analogue scale. If pain intensity was the only measure reported, analgesia was defined as adequate if patients had reported pain intensity as none, slight or mild, or had scored a reduction of more than 70% using a visual analogue scale.

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.

Assessment of study quality
The strength of evidence was assessed according to pre-existing guidelines (the Ontario Cancer Treatment Practice Guidelines Initiative). The strength of evidence of the identified studies was assessed independently by both authors.

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?
Only a narrative synthesis was appropriate given the study design and quality of the included studies.

How were differences between studies investigated?
The authors do not state how differences between the studies were investigated.

Results of the review
Eight retrospective case series (3,985 patients) were included.

Across the studies, 69 to 100% of patients achieved adequate analgesia. However, there are a number of methodological limitations to the studies: none provided details about the time and circumstances of assessment, and many had short or variable follow-up, small sample sizes, or high rates of exclusions and drop-outs. Not all studies used analgesics recommended in the original WHO analgesic ladder.

Authors’ conclusions
The studies do not provide sufficient evidence to estimate the effectiveness of the WHO analgesic ladder for the management of cancer pain. Until results from carefully designed controlled trials are available, it would be inappropriate to judge the performance of clinicians, programmes and institutions or to design policies based on such evidence.

CRD commentary
This is a thorough review, which is limited in scope by the quality of the available evidence. Not enough information about the individual studies is given, however, it seems likely that this information was not available from the primary study publications.

Implications of the review for practice and research
More well-designed trials are required before the effectiveness of the WHO analgesic ladder for the management of cancer pain can be evaluated.

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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.