Adjuvant treatment in gastric cancer

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Authors' objectives
To review the published results of randomised clinical trials on adjuvant treatment of stomach cancer.

Searching
MEDLINE was searched and cross-referenced for studies published in the English language from 1967 to 1993, including those published in Japanese journals.

Study selection
Study designs of evaluations included in the review
Randomised controlled trials (RCTs) were included.

Specific interventions included in the review
Various adjuvant treatments including chemotherapy, radiotherapy alone or in combination with chemotherapy, and chemoimmunotherapy. The drugs studied were: thiotepa, 5-fluorodeoxyuridine, mitomycin C, 5-fluorouracil, adriamycin, vincristine, cyclophosphamide, methyl CCNU, vinblastine, 1,3-bis(2 chlorethyl)-1-nitrosourea, tegafur, cytosine arabinoside, florafur, levamisole, picibanil, SPG, futraful, bestatin, poly AU, FT 207, BCG, N-CWS and PSK.

Participants included in the review
Patients with adenocarcinoma of the stomach who had received adjuvant treatment following surgery (curative, non-curative, palliative or unresectable).

Outcomes assessed in the review
Survival, response rates, toxicity, rates of recurrence and liver metastases.

How were decisions on the relevance of primary studies made?
The author does not state how the papers were selected for the review, or how many of the reviewers performed the selection.

Assessment of study quality
The author does not state that they assessed validity.

Data extraction
The author does not state how the data were extracted for the review, or how many of the reviewers performed the data extraction.

Methods of synthesis
How were the studies combined?
The studies were grouped according to type of adjuvant treatment, and a narrative review was undertaken for the various agents and combinations used.

How were differences between studies investigated?
The author does not state how differences between studies were investigated.

Results of the review
A total of 43 trials were reviewed (12,354 patients):

16 trials of adjuvant chemotherapy (3,778 patients),

9 trials of adjuvant radiation treatment with or without chemotherapy (995 patients),

5 Japanese trials of adjuvant chemotherapy (4,127 patients), and

13 trials of adjuvant chemoimmunotherapy (3,454 patients).

Only one of the 3 trials comparing a single-agent adjuvant chemotherapy to a control gave a statistically-significant advantage in the treatment arm. The drug under study was mitomycin C given in high doses; the survival advantage was still maintained at 105 months median follow-up.

One of the 13 trials comparing combination chemotherapy to a control reported a statistically-significant survival advantage in the treatment arm. Out of the 9 trials of adjuvant radiation treatment with or without chemotherapy, only 1 unconfirmed study gave a statistically-significant survival advantage (P<0.01).

Other trials showed an increase in side-effects that led to prolongation or discontinuation of planned treatment.

Of the 5 Japanese trials of adjuvant chemotherapy, there were 2 reportings of mitomycin C showing a significant survival advantage.

Of the 13 trials of adjuvant chemoimmunotherapy, 5 reported a statistically-significant survival advantage in favour of cases given immunotherapy, as compared with chemotherapy or surgery alone. Three of the remaining trials showed an improvement in survival in patients given chemoimmunotherapy; subset analysis of patients with stages III and IV disease or non-curratively resected cases showed a statistically-significant survival advantage over cases not given immunotherapy. The 5 remaining trials showed no survival advantage in patients given immunotherapy.

Authors' conclusions
RCTs performed to date in North America and Europe do not generally support the use of adjuvant chemotherapy in resected gastric cancer. The role of adjuvant radiation therapy is limited because of the poor tolerance of gastric bed tissue to high doses of radiation treatment. The results obtained with chemoimmunotherapy appear more encouraging than those with other treatments. However, comprehensive management strategies still need to be developed for the treatment of gastric cancer that would control local recurrence, peritoneal recurrence and haematological metastases. No single method of treatment has so far proved able to control these three sites of potential failure.

CRD commentary
The search strategy was not well defined and there was no indication of the search terms used. The review states that 46 papers were reviewed, although it appears that 3 studies present previously published data. A thorough narrative review was presented.

Bibliographic details

PubMedID
8020004

Other publications of related interest
Indexing Status
Subject indexing assigned by NLM

MeSH
Adenocarcinoma /surgery /therapy; Adjuvants, Immunologic; Chemotherapy, Adjuvant; Humans; Randomized Controlled Trials as Topic; Stomach Neoplasms /surgery /therapy; Treatment Outcome

AccessionNumber
11994000336

Date bibliographic record published
30/04/1996

Date abstract record published
30/04/1996

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.