



CASE REPORT

Curative treatment in a patient with gastric cancer stage IV: a case report [v1; ref status: indexed, <http://f1000r.es/S85RQ2>]

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Abstract

A 39-year old patient with gastric adenocarcinoma stage IV failed to respond to preoperative chemotherapies containing 5-FU and cisplatin as well as 5-FU and irinotecan. After third-line chemotherapy with two cycles of docetaxel and cisplatin we confirmed a clinical partial response. A complete histologically confirmed remission was detected after complete resection of the tumor. Following two postoperative cycles of docetaxel and cisplatin, the tumor is still in complete remission after more than eight years.

Article Status Summary

Referee Responses

Referees	1	2	3	4
v1 published 19 Oct 2012	report	report	report	report

- 1 **Maria Alsina Maqueda**, University Hospital Vall d'Hebron, Universitat Autònoma de Barcelona Spain
- 2 **Ian Beales**, University of East Anglia UK
- 3 **S Yousuf Zafar**, Duke University Medical Center USA
- 4 **Peter M Schlag**, Charité Comprehensive Cancer Center, Charité Campus Germany

Latest Comments

No Comments Yet

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Competing Interests:

No competing interests were disclosed.

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Case report

In November 2003, a 39 year old male patient was diagnosed with a locally advanced gastric adenocarcinoma. The diagnosis and tumor stage were confirmed by gastroscopy, endoscopic ultrasound (EUS = u-staging), computer tomography (CT) scans of the thorax/abdomen and a bone scintigraphy. Gastroscopic biopsies revealed a *Helicobacter pylori*-negative gastric adenocarcinoma, diffuse type G3. According to the TNM/UICC staging system the carcinoma stage was cT4N3M0 or stage IV, respectively¹. We found an invasion of the colon transversum and more than sixteen significantly enlarged lymph nodes (Figure 1a). We did not test the Her-2-neu status in 2003. Multidisciplinary treatment planning included preoperative chemotherapy followed by operation and postoperative chemotherapy in curative intention. The patient suffered from a severe hypertensive cardiomyopathy, thus he was not eligible for an anthracycline containing chemotherapy.

After six weeks on PLF (cisplatin 50 mg/m² every two weeks, weekly folinic acid 500 mg/m² and 5-FU 2000 mg/m²/24h), we found no response. We changed to the FLI-regiment (weekly folinic acid 500 mg/m², 5-FU 2000 mg/m²/24h, irinotecan 80 mg/m²), there was no response after six weeks as well. After applying two cycles of DC (docetaxel 50 mg/m² d 1 + 15, cisplatin 50 mg/m² d 1 + 15, every four weeks), we detected a partial remission on endoscopy and abdominal CT (Figure 1b). In June 2004, a gastrectomy with a D2 lymph node dissection was performed resulting in a R0 status and a pathologically confirmed complete remission (CR). The patient was in good postoperative condition, he tolerated two further postoperative cycles of DC well without more than grade-2-toxicity. In September 2004, the patient underwent a laparotomy due to an acute bowel obstruction caused by adhesive bands after previous abdominal surgery. No carcinoma was detected macroscopically or histologically (Figure 1c). Up to this day, more than thirteen years after the diagnosis, the tumor is still in CR. The patient's quality of life is not compromised in any way (ECOG performance status 0).

Using the TNM/UICC-classification of gastric cancer 2010, our patient would be classified as stage cT4bN3bM0, stage IIIc².

Discussion

The 5-year median overall survival rate for stage III and IV patients receiving perioperative chemotherapy is 39.1% and 5.2%

after surgical resection alone³⁻⁵. Since 2010, the standard of care in locally advanced gastric cancer (uT3-T4) is three preoperative cycles of an anthracycline containing polychemotherapy like epirubicin, cisplatin and 5-FU (ECF) followed by three postoperative cycles. This kind of treatment improved 5-year survival from 23% with surgery alone to 36.3%^{6,7}. There are no sufficient data from randomised phase III studies to strongly recommend perioperative chemotherapy for patients with uT2 carcinomas⁸.

Two preoperative cycles of PLF seem to be as effective as preoperative ECF^{9,10}. In advanced gastric cancer, polychemotherapy offers a survival advantage over single-agent therapy. Comparing 5-FU/cisplatin-containing regimens with versus without anthracyclins and 5-FU/anthracycline-containing combinations with or without cisplatin there is a significant survival benefit for 5-FU + anthracyclins + cisplatin. In this analysis, secondary resectability in locally advanced disease was not reported¹¹.

In metastatic gastric adenocarcinomas and adenocarcinomas of the gastrooesophageal junction 5-FU can be substituted by capecitabine without compromising the results, so capecitabine may be used instead of 5-FU in the perioperative setting in combination with cisplatin (XP) or with epirubicin and cisplatin (ECX)¹²⁻¹⁴. In metastatic disease oxaliplatin has been tested as a substitute for cisplatin in combination chemotherapy with similar results^{13,15}. The use of oxaliplatin can be recommended for patients suffering from renal insufficiency or patients with severe adverse events after cisplatin treatment⁸. Irinotecan or Docetaxel combinations have not been established for the perioperative treatment of gastric cancer in 2004. Both drugs were used in combinations for palliative therapy only^{16,17}.

At the ASCO meeting in 2011 the FLOT3 trial¹⁵ has been presented:

Patients with untreated operable gastric adenocarcinoma received four preoperative cycles of FLOT (5-FU, leucovorin, oxaliplatin, docetaxel) and underwent surgical resection (D2 resection) followed by four postoperative cycles. Patients with limited metastatic disease (distant intra-abdominal lymph nodes and/or a maximum of one organ involved in metastatic disease, ECOG-PS < 1) received eight cycles and underwent surgical resection when a complete macroscopic resection seemed possible. Surgical treatment was conducted

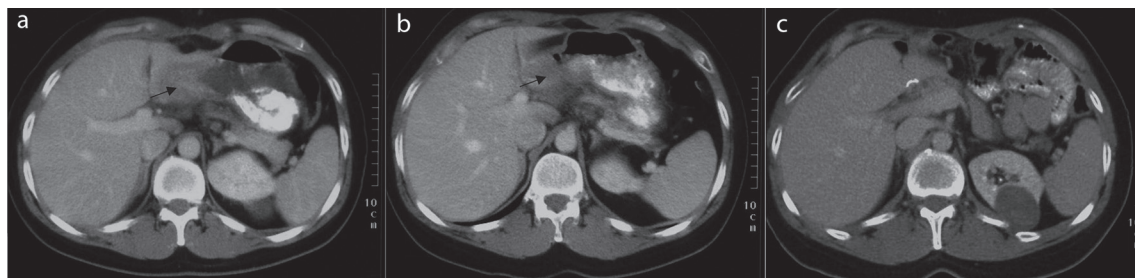


Figure 1. Abdominal CT scans. a) before treatment December 2003 b) after partial remission May 2004 c) after complete remission November 2005.

in 95.7% and 42.64% of the patients, respectively. For operable patients the median overall survival was not reached, for patients with limited disease the median overall survival was 18.6 months; there were also significant differences in progression-free survival ($p < 0.001$). Grade 3–4 toxicities were similar among the groups and occurred in 70.6% vs. 72.1% of the patients, respectively¹⁵.

In gastric adenocarcinoma or adenocarcinoma of the gastroesophageal junction stage uT2 a perioperative chemotherapy can be considered (Level of evidence 1b), in stage uT3 and in resectable uT4a adenocarcinomas patients should receive a pre- and postoperative polychemotherapy (Level of evidence 1b)⁸.

Our patient may be one of the rare cases with advanced gastric cancer cured by perioperative third line chemotherapy and surgery.

Consent

Written informed consent for publication of clinical details and clinical images was obtained from the patient.

Author contributions

IM found the case in his clinic. AD, ER, IM and HFK collected data. IM drafted the manuscript. DM reviewed the literature and revised the manuscript critically. All authors were involved in the revision of the draft manuscript and have agreed to the final content.

Competing interests

No competing interests were disclosed.

Grant information

The author(s) declared that no grants were involved in supporting this work.

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[Reference Source](#)

Current Referee Status:



Referee Responses for Version 1



Peter M Schlag

Charité Comprehensive Cancer Center, Charité Campus, Berlin, Germany

Not Approved: 19 November 2012

Referee Report: 19 November 2012

This is a single case report without any new information and is without any scientific background.

I have read this submission. I believe that I have an appropriate level of expertise to state that I do not consider it to be of an acceptable scientific standard, for reasons outlined above.

Competing Interests: No competing interests were disclosed.



S Yousuf Zafar

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Approved: 14 November 2012

Referee Report: 14 November 2012

I have read this submission. I believe that I have an appropriate level of expertise to confirm that it is of an acceptable scientific standard.

Competing Interests: No competing interests were disclosed.



Ian Beales

School of Health Policy and Practice, University of East Anglia, Norwich, Norfolk, UK

Approved: 09 November 2012

Referee Report: 09 November 2012

The authors do discuss the FLOT3 trial at disproportionate detail compared to the rest of the discussion and probably a bit too excessively in response to the case reported. Whilst these data are interesting, it would be helpful to place these in a bit more context in relation to the case reported.

There are some typographical and grammatical errors in the Discussion section (pre-operative and insufficient data in the first paragraph).

The discussion about irinotecan and docetaxel combinations in the Discussion section: the authors could clarify whether they are primarily discussing the situation of current knowledge or as it stood in 2004. It would be most appropriate to discuss the current state of this combination in the article.

I have read this submission. I believe that I have an appropriate level of expertise to confirm that it is of an acceptable scientific standard.

Competing Interests: No competing interests were disclosed.



Maria Alsina Maqueda

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Approved: 08 November 2012

Referee Report: 08 November 2012

Overall, this case report is interesting and worthy of publication. There are however a few revisions that should be made:

1. In the Introduction section (2nd paragraph, 1st sentence), the chemotherapy scheme used in the patient is not the same as the one used by the study referenced; the scheme should be justified.
2. In the Introduction section (3rd paragraph, last sentence) there are more recent references to justify the classification statement ([Thuss-Patiente Eur J Cancer 2011](#), [Kang Clin Oncol 2012](#) and [Van Cutsem ASCO GI 2012](#)).
3. In the Discussion section (4th & 5th paragraphs) the authors refer to a study published in ASCO/JCO 2008, not 2011 which they have stated.
4. In the Discussion section (5th paragraph) the authors describe a study extensively with compared with the rest of the article, maybe authors should justify why (the use of docetaxel?).
5. The authors should discuss more extensively the use of the three lines with different efficacies in the neoadjuvant setting, and they should also address the issue of long gastric patient survivors.
6. In the Reference section, references 9 and 10 references refer to the same study; it is the newest one should appear, and the older one can be removed.

I have read this submission. I believe that I have an appropriate level of expertise to confirm that it is of an acceptable scientific standard.

Competing Interests: No competing interests were disclosed.
