

Multivisceral resection for advanced gastric cancer: Case report

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Abstract

In regard of permanent discussion about necessity and possibility of multi visceral resections in advanced malignancy, we present a clinical case Multi visceral resection total gastrectomy, pancreaticoduodenal resection and the extended right colectomy. A woman 39 years was examined about the violation of gastric emptying and symptoms of gastric bleeding, appeared 2 months prior to treatment. After the examination stomach cancer (poorly differentiated adenocarcinoma, antrum, body and Borrmann III) with the spread to duodenum, invasion of pancreatic head, with involvement of perigastral lymph node without distant metastases was diagnosed. At intraoperative examination circular tumor of stomach with involvement of antrum, body, subcardia, spreading to proximal part of duodenum and Invasion of pancreatic head, right flexure of the colon, right Para colon and mesocolon with middle colic vessels, metastatic lesion of lymph node in groups 3, 4d-7, 15 were detected (oT4N1M0, fT4N2M0 (R0)). Total gastrectomy, pancreatoduodenectomy, extended right colectomy with regional lymphadenectomy D2-3 (lymph nodes of groups 1-13, 14v, 15, 16b1 were removed) were performed. Reconstructive phase of surgery included the formation of nutritional and biliopancreatic loops of the small intestine by Y-en-Roux. In time of the alimentary loop formation esophagoenterostomy and Iliodendostomy were performed. In the biliopancreatic loop have been performed invaginated pancreaticoenterostomy and hepaticoenterostomy. Surgery was completed insertion of transnasal feeding tube in the alimentary loop and four drainages in the abdominal cavity. Postoperative period has been executed according to ERAS with enteral nutritional and physical activation at one day after surgery. There were no complications in the postoperative period. Final diagnosis was the patient was discharged on day 10 in a good condition for adjuvant chemotherapy (XELOX). Within 12 months of observation after 6 months of the adjuvant treatment no local or metastatic progression of tumor and no dyspeptic symptoms have been identified.

The diagnosis of pT4b gastric tumors is not an easy task. The clinical-pathological correlation is very flawed: it is not uncommon that we interpret a computed tomography scan as an invasion of adjacent organ (cT4b) and then confirm a

desmoplastic reaction in the anatomopathological specimen analysis. In a meta-analysis published in 2011, Seevaratnam et al. studied the role of computed tomography in determining T4 status in gastric cancer: the accuracy of the radiological method was 80%. In another systematic review, Cardoso et al. showed that the accuracy of endoscopic ultrasonography in evaluating T4 gastric tumors (79%) is very similar to that of computed tomography.

Even the intraoperative evaluation is flawed, which eventually leads the surgeon to a multiorgan resection when in fact the structure adjacent to the tumor did not present a real invasion, but rather a desmoplastic reaction. Some Japanese series show that, in up to 55% of cases, what was treated as tumor invasion at laparotomy was, in fact, a desmoplastic reaction confirmed by the pathologist. In particular, the challenge of evaluating tumor invasion is even greater when we deal with a tumor closely related to the pancreas. Piso et al. found pancreatic invasion in only 39% of patients submitted to gastrectomy associated with monobloc pancreatectomy. Peritoneal dissemination can be assessed by staging laparoscopy. Some studies show that laparoscopy promoted a change in the therapeutic strategy in 20 to 50% of the cases, sparing many patients from an unnecessary laparotomy. In a retrospective study involving 65 patients submitted to radical surgery, Carboni et al. reached R0 surgery in 40 patients (61.5%). Of these, 80% presented invasion of adjacent organs/structures at the anatomopathological evaluation (pT4b). In the remaining 25 patients the procedure was not radical: in 18 patients the surgical margins were microscopically affected (R1 surgery) and in the other seven the surgery was R2 (margin macroscopically affected by tumor). On the other hand, Xiao et al. reached R0 surgery in 68.2% of the cases of their retrospective series of 63 patients. In only 39.7% of the patients, tumor invasion of the adjacent organ was confirmed by the anatomopathological analysis.

Considering the aggressiveness of the multiorgan surgery, arises the discussion of the real benefit of this procedure when compared to palliative resections or even to the derivative procedures. Kim et al. evaluated 132 patients undergoing surgery for T4 gastric cancer. They compared three subgroups: multiorgan surgery (group 1), isolated gastrectomy (group 2) and surgery without resection, such as

gastrojejunostomy and intraperitoneal chemotherapy (group 3). Group 3 included a considerably larger number of patients with Borrmann IV tumor, peritoneal dissemination and distant metastasis. In the multivariate analysis, surgical radicality (R0 vs R1 vs R2) had an impact on survival despite the important disparity between the groups. When groups 1 and 2 were compared, survival at five years was greater in group 1, with statistical significance. In a retrospective series of 169 patients submitted to multiorgan resection, Oñate-Ocaña et al. also found different survival rates when compared patients who underwent R0 surgery with those submitted to R1/R2 surgery. Several studies have sought to evaluate survival after multivisceral resection in gastric cancer according to the associated resected organ.

demonstrated a higher median survival in patients with hepatic invasion when compared with invasion of the pancreas, colon and spleen. Min et al. evaluated 243 pT4b patients who underwent R0 surgery. Five-year overall survival was 36.8% and median survival was 26 months. In patients with pancreatic invasion, survival at five years was 23.3%, whereas in patients without pancreatic invasion, survival at five years was 42.1%. In patients with pancreatic invasion, there was no survival at five years when resection involved duodenopancreatectomy. In patients who received another type of pancreatic resection (distal pancreatectomy and wedge resection), five-year survival was 27.4%.

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