

The Dissection of Para-Aortic Lymph-Nodes During Pancreaticoduodenectomy for Cancer and Its Prognostic Value

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Context Pancreaticoduodenectomy (PD) is the treatment of choice for patients affected by periampullary cancer. Para-aortic nodes dissection during PD for cancer is not routinely performed, even in high volume pancreatic hospitals. However, according to the American Joint Committee on Cancer (AJCC), the neoplastic involvement of para-aortic lymph-nodes is considered expression of metastatic disease (M1). **Objective** The aims of this prospective analysis were to evaluate the incidence of para-aortic lymph-nodes involvement in patients undergoing PD for periampullary cancer and its prognostic value. **Materials and methods** We evaluated 127 consecutive patients undergoing PD for periampullary cancer between 2002-2013 at "Campus Bio-Medico" University of Rome. In all case a meticulous para-aortic lymph node dissection was performed. We analyzed the incidence rate of para-aortic lymph-nodes involvement. Moreover, we evaluated the difference in terms of overall survival between patients with (M+) and without (M-) involvement of para-aortic lymphnodes. **Results** Considering all 127 patients that underwent PD for cancer: 74 patients (58%) were affected by adenocarcinoma of the head of the pancreas; 8 patients (6.3%) were affected by distal cholangiocarcinoma; 17 patients (13.4%) were affected by carcinoma of the ampulla of Vater; and 2 patients (1.6%) were affected by carcinoma of the duodenum. The incidence rate of involvement of para-aortic lymph-nodes was 11.0%. Particularly,

the involvement of para-aortic lymph-nodes was found in 14.9% of patients affected by adenocarcinoma of the head of the pancreas and in 37.5% of patients affected by distal cholangiocarcinoma. On the opposite, an involvement of para-aortic lymph-nodes was not found in patients affected by adenocarcinoma of the ampulla or by carcinoma of the duodenum. The overall survival of all 127 patients was 13 months (range: 0-132 months). The overall survival was 5.5 months (range: 0-27 months) in patients with involvement of para-aortic lymph-nodes (M+) and 15 months (range: 0-132 months) in patients without involvement of para-aortic lymph-nodes ($P<0.05$). **Conclusions** PD associated with lymphadenectomy is the gold-standard treatment for patients with periampullary cancer. The para-aortic lymph node dissection is not routinely performed during PD. Our data showed that the rate of neoplastic involvement of para-aortic lymph nodes was about 10%. Particularly, para-aortic lymph-nodes involvement was more frequent in patients affected by distal cholangiocarcinoma (37% of cases) and by adenocarcinoma of the head of the pancreatic (15% of cases). Moreover, our results showed that the involvement of para-aortic lymph-nodes negatively affected the prognosis: overall survival was 5.5 months in patients with lymph-nodes metastases and 15 months in patients without lymph-nodes metastases.