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Locoregional Recurrence After Pancreatectomy for Pancreatic Cancer; is Reoperation Ever Indicated?

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Mini Review

As survival after pancreatectomy for pancreatic adenocarcinoma (PDAC) has significantly improved with modern chemotherapy protocols and more aggressive surgery including vascular resections, more patients may live long enough to develop locoregional recurrence, but not diffusely metastatic disease. Due to the rarity of such cases, even in major pancreas referral centers, no prospective randomized studies exist and published experience includes only descriptive studies with small number of patients. It is important to analyze and dissect such studies in order to extract as reliable conclusions as possible, so optimal management can be offered to these patients, especially in the context where resection of recurrent disease is not included in any set of guidelines.

Local recurrence (pancreatic bed, peripancreatic lymph nodes, solitary metastases to the mesentery): Eighteen studies (with at least 5 patients each) have been published describing surgery, chemotherapy or radiation treatment [1]. They collectively include 313 patients. Eight studies with 100 patients describe surgical treatment, but only two presented survival data. Median survival was 25 and 26 months [2,3]. Major postoperative morbidity was 29% [1]. In 7 studies with 153 patients, chemotherapy was offered and median survival was 10, 12, 16, 16, 17, 18, and 19 months. In the remaining 4 studies, 60 patients were subjected to radiation therapy resulting to median survival of 9, 12, 13, and 16 months. In most studies, longer disease-free interval was associated with longer survival after treatment of recurrence.

Local recurrence - pancreatic remnant: Fifteen studies with 52 patients have been published [4], but 7 of those are single case reports. Five studies (with at least 6 patients each) sum up the experience on 36 patients. Completion pancreatectomy was performed in 92% and median survival was 15, 16, 28, 28, and 31 months.

Recurrence to the liver: Surgery has been considered only in oligometastatic liver recurrence (up to 3 lesions). The majority of studies describe treatment of oligometastatic synchronous disease; not recurrent disease. The latter is the topic of only 3 studies [5-7] with 52 patients altogether, but only one [5] presented median survival of 31 months.

The limited descriptive published experience suggests that any treatment of locoregional recurrent disease leads to survival benefit (around 1.5 year) compared to palliative management alone. Authors believe that specifically resection of recurrent disease is associated with longer survival, around 2 years, despite some postoperative morbidity. However, it is of paramount importance to understand that patients included in these studies were very highly selected

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with both limited bulk of recurrent disease and good performance status. This combination occurs only rarely in recurrent PDAC, so it is essential not to generalize the previously stated assessments.

Generally, recurrent PDAC behaves as a systemic disease requiring systemic treatment. Patients with recurrence generally present with diffuse metastatic involvement and significantly impaired performance status, implying rather aggressive biology of the recurrent disease, which may often limit any form of systemic chemotherapy. Very rarely however, recurrence may be more indolent: disease free interval after pancreatectomy may be longer (9-20 months), metastatic involvement may be limited based on modern imaging, and performance status not declined. Such a combination alludes to a more "mild PDAC biology" and leads to patient "self-selection". Still, systemic chemotherapy is the mainstay of treatment in this minority of patients, but if the disease remains under control after its completion and performance status continues to be good, resection may be considered.

Due to the striking scarcity of such "self-selected" patients with recurrent PDAC, no definitive conclusions for surgical treatment can be drawn until multi-institutional prospective studies are conducted by major pancreas referral centers. Accordingly, although surgery may be reasonable to offer under the restrictions stated above, it still remains "out of the box" and no scientifically based prognosis is currently available.

Declarations of interest

none

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