A rare case of mixed neuroendocrine tumor and adenocarcinoma of the pancreas

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Neuroendocrine carcinoma (NEC) of the pancreas is a rare tumor with aggressive progression and poor prognosis. Its co-existence with adenocarcinoma poses significant clinical problems and has not been addressed in the literature. Herein, we describe a case of a 51 year old male who underwent pancreateoduodenectomy for a pancreatic head tumor 1.5×1×1.4 cm. Histological examination of the specimen revealed a mixed neoplasm: A well differentiated Cytokeratin 7 (+), Cytokeratin 20 (+), CEA (+) adenocarcinoma, neoplastic blasts of which are extended focally to the submucosa without invading the muscular layer and a low differentiated NEC consisting of solid clusters and pagetoid formations. The neoplastic cells of the former tumor are homogenous without obvious cytoplasm and a high number of mitoses. Immunohistochemical staining showed that the latter tumor was Cytokeratin 7 (-), Cytokeratin 20 (-), CEA (-), Cytokeratin MNF 116 (+), CD56 (+), NSE (+), Synaptophysin (+), Chromogranin (-). Carcinomatous lymph embolus was obvious as well but all 18 lymph nodes of the specimen were free of neoplastic disease and the surgical margins of the specimen were tumor free. Two months after the operation the patient developed liver metastasis. Ocreoscan revealed a region with moderate scintillation in the left hepatic lobe. FNA cytology of the hepatic lesions revealed low grade carcinoma with neuroendocrine characteristics and the patients received first line chemotherapy treatment with VP and CDDP. After 2 months CT of the abdomen showed progressive disease (PD) and received 2nd line chemotherapy with paclitaxel, ifosfamide, Mesna and CDDP. Three months later due to PD the patient received 3rd line treatment with Folfox and Avastin but he did not responded and after two months received Folfiri and Avastin, four months later again the patient had PD and received 5th line treatment with CAV. The patient experienced grade four myelotoxicity without evidence of any response to chemotherapy and denied further treatment. He was discharged from the hospital and succumbed to his disease 13 months after the operation. Co-existence of NEC with adenocarcinoma of the pancreas is a very rare entity, may be resistant to various chemotherapeutic regimens and have very poor prognosis.

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Comparison of active fixation pacing leads and passive fixation leads: Prospective observational study in China

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Despite the advancements in active fixation leads, physicians are reluctant towards their use in routine clinical practice. Data on comparison of active fixation leads with passive fixation leads is scant. We evaluated the effectiveness of active-fixation compared to passive fixation pacing leads by observing lead performance parameters in patients undergoing pacemaker implantation in China. A single-center, prospective observational study including a total of 1217 who underwent permanent pacemaker implantation in Department of Cardiology of People’s Hospital of Yuxi City during March 1995 to March 2015. Efficacy was determined based on parameters such as implantation time, and pacing threshold. Additionally, lead dislocation, bleeding, pneumothorax, hematoma/infection was also determined. A total 530 patients received active fixation electrode and 497 patients received passive fixation electrode. Active fixation group reported significantly lesser mean implantation time and pacing thresholds (P<0.05) as compared with passive fixation electrode group and threshold in atrial active fixation pacing leads were stable throughout the observation period. No instances of lead perforation and cardiac tamponade were reported in active fixation group. There were absolutely no cases of implantation failure (P<0.001), electrode dislocation/re-fixation in one year (P=0.014) in active fixation group with reportedly lesser bed rest time (P=0.027) and duration of hospital stay (P=0.038). In conclusion, active fixation leads demonstrated satisfactory thresholds with no adverse lead related events, good stability and steady long-term thresholds till 1 year follow up indicating active fixation is better than passive fixation electrode.

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