膵癌早期診断に対する新しい内視鏡的ならびに分子 生物学的アプローチ

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A new combination of endoscopic ultrasonography and DNA diagnosis using pancreatic juice for the early detection of pancreatic cancer

Research Project

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Research Abstract

The combination of endoscopic ultrasonography and DNA diagnosis using pancreatic juice for the detection of small pancreatic cancer was evaluated. The patients with upper abdominal pain. abnormal laboratory data or images on the pancreas, or worsening of diabetic control were enrolled in this study. When the findings of a small pancreatic mass or dilated pancreatic duct were detected by endoscopic ultrasonography, the pure pancreatic juice was collected under a duodenofiberscope for the analyzes of k-ras point mutation at codon 12. The pancreatic cancers less than 2 cm in a diameter were clearly visualized as round hypoechoic tumors with irregular margin. The pancreatic ducts were abruptly dilated caudal to the tumors.

Although inflammatory pancreatic masses were generally visualized as square-shaped hypoechoic area without compression or encasement of the neighboring pancreatic ducts, the differentiation from small pancreatic cancer was not always complete, particularly when the tumor was round and the size was less than 1 cm. The incidence of k-ras point mutation analyzed by PCR-RFLP method was 78% (29/37) in patients with pancreatic cancer and 9% (5/53) in those with chronic pancreatitis. The correlation between the incidence of k-ras mutation and tumor size/location were not seen. These results suggest that the combination of endoscopic ultrasonography and DNA diagnosis using pancreatic juice is useful and promising to the early detection of pancreatic cancer.

Research Products (10 results)

All Other All Publications (10 results) [Publications] Watanabe H,et al: "Detection of K-ras point mutations at codon 12 in pure pancreatic juice for the diagnosis of pancreatic cancer by PCR-RFLP analysis." Pancreas. 12. 18-24 (1996) [Publications] Watanabe H,et al: "Detection of K-ras point mutation at codon 12 in pancreatic juice for the diagnosis of pancreatic cancer by hybridization protection assay (HPA): a simple method for the determination of the types of point mutations." Jap J Cancer Res. in press. [Publications] 岡井 高、他:"小膵癌の超音波内視鏡診断." 消化器科. 21. 17-25 (1995) [Publications] 渡辺弘之、他: "臨床検査および膵液中k-ras癌遺伝子点突然変異の検索からみた腫瘤形成性膵炎." 腹部画像診断. 15. 552-563 (1995) [Publications] 渡辺弘之、他:"小膵癌診断における膵液中腫瘍マーカーの測定とk-ras点突然変異の検索." 消化器内視鏡. 7. 1137-1146 (1995) [Publications] 山口泰志、他:"膵癌患者膵液中p53癌抑制遺伝子変異の検討." 腫瘍マーカー研究会雑誌. 10. 123-124 (1995) [Publications] Okai T,Sawabu N,Songur Y,Motoo Y,Watanabe H: "Comparison of lansoprazole and famotidine for gastric ulcer by endoscopic ultrasonography: a preliminary trial: " J Clin Gastroenterol. 20 (Suppl. 2). s32-s35 (1995) [Publications] Watanabe H,Sawabu N,Songur Y,Yamaguchi Y,Yamakawa O,Satomura Y,Ohta H,Motoo Y,Okai T,Wakabayashi T: "Detection of K-ras point mutations at codon 12 in pure pancreatic juice for the diagnosis of pancreatic cancer by PCR-RFLP analysis." Pancreas. 12. 18-24 (1996) [Publications] Songur Y,Okai T,Fujii T,Watanabe H,Motoo Y,Ooi A,Mai M,Sawabu N: "Endosonographi c staging of gastric carcinoma: factors influencing accuracy." Dig Endosc. 8. 5-13 (1996) [Publications] Watanabe H,Miyagi C,Yamaguchi Y,Satomura Y,Ohta H,Motoo Y,Oki T,Yoshimura T,Ts uji Y,Sawabu N: "Detection of K-ras point mutation at codon 12 in pancreatic juice for the diagnosis of pancreatic cancer by hybridization protection assay (HPA): a simple method for the determination of the types of point mutations." Jap J Cancer Res. (in press).

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