Abstract

Background: endoscopic ultrasound guided fine-needle aspiration (EUS-FNA) allows cytologic and/or histologic diagnosis of lesions within or adjacent to the gastrointestinal tract. However, the amount of tissue obtained with a regular 22 gauge needle is not always satisfactory. With the development of a needle XNA-10J-KB (Shot-Gun®) that resembles the automatic liver biopsy needle, it is expected that significant samples be obtained more frequently (core biopsy), optimizing histological analysis. Objective: to compare samples obtained with EUS-FNA using 3 different needle systems: GIP®, NA-10J-1® and Shot-Gun®. Methods: 19 patients underwent EUS-FNA for diagnosis (5) or tumor staging (14). Mean age was 58.9 years (range 27-82), being 50% men. All patients were submitted to EUS-FNA with the 3 needle models. The Shot-Gun® model was “shot” when its tip was near the target inside the lesion, followed by aspiration. Samples were submitted for cytologic and histologic examination. Results: mean lesion size was 3.0 cm (range 0.8-5.5 cm). Final diagnoses were made after surgery or intra-operative biopsy: 13 pancreatic tumors (12 adenocarcinomas and 1 neuroendocrine tumor), 4 chronic pancreatitis, 1 acute pancreatitis, and 1 cholangiocarcinoma. Specimens adequate for cytologic diagnosis were obtained in 13/19 (68.4%) patients using GIP® model, in 14/19 (73.7%) with NA10J-1®, and in 17/19 (89.5%) with Shot-Gun® model (p=0.039). Histologic analysis was possible in 10/19 (52.6%) patients using the GIP® model, in 14/19 (73.7%) with NA10J-1®, and in 17/19 (89.5%) with Shot-Gun® model (p=0.005). Adequate samples for cytologic or histologic assessment in 16/19 (84.2%) patients using the GIP® model, in 17/19 (89.5%) with NA10J-1®, and in 18/19 (94.7%) with Shot-Gun® model (p=0.223). In two cases biopsies were negative due to very hard tumors. Conclusion: the Shot-Gun® needle obtained better samples for histological diagnosis than NA10J-1® needle and GIP®.

Keywords

biopsy, Fine-Needle, Diagnosis, Endosonography, Pancreatic Neoplasms, Endoscopic techniques.