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High-Intensity Focused Ultrasound Shows Promise in Pancreatic Cancer

NEW YORK (Reuters Health) Aug 30 - Ultrasound-guided high-intensity focused ultrasound (HIFU) appears safe and feasible as a treatment for advanced pancreatic cancer, say researchers from China. "The clinical results we achieved in China are very encouraging in the HIFU treatment of pancreatic cancer," Dr. Feng Wu told Reuters Health.

"Recently, this technique has been introduced to UK, Japan, South Korea, and Malaysia, and the results have further confirmed that HIFU is safe, effective, and feasible," added the investigator from Chongqing University of Medical Sciences, China.

Dr. Wu and colleagues evaluated ultrasound-guided HIFU in the treatment of eight consecutive patients with advanced-stage pancreatic cancer.

"Briefly, therapeutic ultrasound energy is produced by a 12-cm-diameters transducer with a focal length of 135 mm operating at 0.8MHz," the team explains in their report in the September issue of Radiology. Patients are anesthetized during the procedure.

Pain was relieved within 24 to 48 hours in all patients, the report indicates, and obvious regression of the treated lesions was observed during follow-up.

Three of five patients who underwent contrast-enhanced MR imaging showed evidence of coagulation necrosis in the treated region, the report indicates. Tumor regression in all patients ranged from 20% to 70% (mean, 49.4%).

Four patients died a median of 11 months after the procedure, the researchers note, and four remained alive as late as 16 months post-HIFU. The overall median survival was 11.25 months.

"Because most patients with pancreatic cancer have unresectable disease and no effective modality offers survival benefits for them, the results from our study are very encouraging," the investigators conclude.

"Most patients with pancreatic cancer should be HIFU candidates for the purpose of either cure or palliation," Dr. Wu said.

Specifically, "If tumor is very close to the bile duct or causes bile obstruction, we can routinely place endoscopic stents to prevent HIFU damage to the duct before the HIFU procedure," Dr. Wu noted.

"However, it would be a contraindication to those who have tumor invading duodenal wall,

because HIFU may ablate the duodenum, resulting in the risk of duodenal perforation," he advised.

"I am preparing a HIFU clinical trial protocol with my colleagues in Europe for a multiple-center, randomized clinical trial (phase II and III) in European countries such as UK, Italy, and Germany, where there is the high incidence of pancreatic cancer," Dr. Wu added. "I hope that this trial will start next year and would be of good benefit to the patients in the Western world."

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