

Professor Hans Beger: bring light to patients with pancreatic cancer

Received: 19 December 2017; Accepted: 30 December 2017; Published: 23 January 2018.

doi: 10.21037/apc.2017.12.03

View this article at: <http://dx.doi.org/10.21037/apc.2017.12.03>

Expert introduction

Professor Hans Beger (*Figure 1*) is one of the most renowned general and gastrointestinal surgeons in Germany. He was Chairman and Head of the Department of General and Visceral surgery at the University of Ulm between 1982 and 2001. His worldwide reputation stems from his expertise in surgery of the pancreas and the upper GI tract. Prof. Beger has served as president of national and international societies in the fields of gastroenterology, surgery, gastrointestinal surgery and molecular biology. He was president of the German Society of Gastroenterology and vice president of the Society of Surgery of the Alimentary Tract. He has been active for more than 40 years as a gastrointestinal surgeon, with a special focus on hepatobiliary and pancreatic surgery, and has educated more than 50 surgeons who are now in leading positions in Germany and around the world. He established the European Study Group of Pancreatic Cancer (ESPAC) and the Pancreatic Cancer Foundation in Germany to foster research in the understanding of molecular mechanisms and to develop more effective medical and surgical treatment strategies.

Hans Beger has received numerous international awards for his clinical and research work. He is principle editor and has written 24 books and more than 740 original papers, which have been published primarily in leading international journals. In addition to his scientific work, he is one of the founders of the German Society of Visceral Surgery. As editor-in-chief of *Langenbeck's Archives of Surgery* since 1998, Beger supports the publication of research data from institutions and departments of surgery in Germany. Recently he was awarded the honorary fellowship of the American College of Surgeons. The 8th World Congress of IHPBA 2008 in Bombay awarded him with a lecture as a living legend in the field of pancreatology.



Figure 1 Prof. Hans Beger.

Interview questions & responses

APC: Would you like to briefly introduce yourself, your specialties and interests to our readers?

Prof. Beger: I am Hans Beger, a professor of surgery and pancreas surgeon in Ulm, Germany. I am a senior surgeon of the Department of GI tract surgery and chairman of the German Foundation Battle Against Pancreatic Cancer.

APC: Your speech title is “Parenchymal-sparing resection for benign tumors of pancreatic head” Could you please summarize the main points of the perspective?

Prof. Beger: Computer tomography (CT) and magnet resonance tomography (MRT) are sensitive radiologic methods to identify pancreatic tumors of the size >5 mm. As a consequence of general abdominal radiologic investigation, an increasing amount of benign tumors of the pancreas are diagnosed. Cystic neoplasms and neuroendocrine tumors are primary benign tumors with

high potential of transformation into a pancreatic cancer. Up to 50 % benign tumors are silent, detected accidentally not causing abdominal discomfort. Many of the patients with benign tumors need surgery. However, the application of standard surgical procedures (pancreaticoduodenectomy for pancreatic head tumor and left-sided pancreatic resection for body and tail tumors) are multiorgan resections developed for malignant pancreatic diseases. The application of major oncologic resections for benign tumors is associated with a considerable high surgery-related early postoperative morbidity and hospital mortality. In the long-term follow-up after application of standard oncologic resections, part of the patients suffer diabetes mellitus and exocrine pancreatic insufficiency with the need of life-long treatment. Parenchyma-sparing resections for benign pancreatic tumors are well established. However, they are not practiced as standard procedures. These are tumor enucleation, pancreatic middle segment resection and duodenum-preserving pancreatic head resection. The principle is only local extirpation of the tumor avoiding multi-organ resection with conservation of peritumoral tissue. The parenchyma-sparing pancreatic resections for benign tumors have the advantage of low surgery-related early postoperative morbidity and a low hospital mortality below 1%. In the long-term outcome, the parenchyma-sparing resections have a very low risk for dysfunction of glucose metabolism and for exocrine pancreatic dysfunctions.

APC: *To perform the successful Parenchymal-sparing resection, what skills or knowledge a surgeon or the whole team should possess? What should be the training focus? How many Parenchymal-sparing resection have you done so far? Is there any impressive case that has brought you some inspirations?*

Prof. Beger: The application of parenchyma-sparing resection for benign pancreatic tumors should be performed in surgical institutions with high-level performance status for pancreatic surgery. The establishment of randomized parenchyma-sparing pancreatic resections for benign tumors as standard procedures needs the evidence by randomized prospective, controlled trials comparing parenchyma-sparing pancreatic resections with classical standard multi-organ resections. During 32 years working in the university hospitals, I have personally performed more than 2,000 surgical procedures on the pancreas. The University Hospital of Ulm had an annual caseload

of pancreatic surgery of about 400 cases. The duodenum-preserving pancreatic head resection, which was introduced at the University Hospital of the Free University of Berlin and further developed at the University Hospital in Ulm, has been applied in more than 650 cases with inflammatory tumors of the pancreatic head, cystic neoplasms, endocrine tumors as well as low-risk periampullary cancers. In terms of pancreatic cancer surgery, the general experience is disappointing, since in the last 30 years no significant improvement in the long-term survival after pancreatic cancer resection has been documented. Presently, the 5-year survival after pancreatic cancer resection for ductal pancreatic cancer is about 3–5%. Ninety-five percent of patients will die in the year of diagnosis of pancreatic cancer or in the first 3 years after surgery. The major goal of pancreatic surgeons is to perform surgery in early cases of pancreatic cancer or to prevent development of pancreatic cancer by resection of benign tumors, which have the risk of development into a cancerous process.

APC: *How long have you been a surgeon? At the very beginning, what have driven you to become a surgeon?*

Prof. Beger: I graduated from the University of Bonn and was a research fellow of the German Research Council. After having received a research grant working in Boston City Hospital, in Denver with Professor Eisman and with Professor Starzl, the founder of liver transplantation, I became interested in transplantation surgery. After the experience of successful transplantation of a liver in a 7-year-old girl in Denver by Professor Tom Starzl, I was fascinated by the research of organ transplantation and aspirated by the impact of successful contribution to survival and health of human beings, who are suffering diseases. In the Department of Surgery of the University Hospital 'Free University Berlin', I performed animal experiments over a period of 3 years in liver, lung, pancreas and heart transplantation; mostly in dogs but sometimes in smaller animals. After that, I changed to clinical surgery for various diseases, particularly in cardiac surgery, transplantation of artificial organs and GI tract surgery.

APC: *Could you give some suggestions to our young surgeons?*

Prof. Beger: I recommend all young surgeons to join a research program in the laboratory or clinical setting. Performing surgical procedures in animals is the best way



Figure 2 Professor Hans Beger: bring light to patients with pancreatic cancer (1).

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to get skilled in surgical techniques. Knowledge in methods of molecular biology are most important for learning basic science and better understanding of diseases. I have performed hundreds of liver transplantations in rats; so I became very skilled in these minimal surgical techniques. The transformation of skills accumulated in the research laboratory into patient management allows the surgeon to care patients with a high level of safe surgical techniques and understanding of diseases. Thus, I think a good surgeon should spend at least 2 years in research laboratories when choosing the professional career of an academic surgeon.

For more details about the interview, please click on the video below (*Figure 2*).

Acknowledgments

On behalf of the editorial office, we would like to extend my gratitude to Prof. Hans G. Beger for the interview.

Funding: None.

Footnote

Provenance and Peer Review: This article was commissioned

doi: 10.21037/apc.2017.12.03

Cite this article as: Bai JY, Seliman H. Professor Hans Beger: bring light to patients with pancreatic cancer. *Ann Pancreat Cancer* 2018;1:4.

by the editorial office, *Annals of Pancreatic Cancer* for the series “Meet the Professor”. The article did not undergo external peer review.

Conflicts of Interest: Both authors have completed the ICMJE uniform disclosure form (available at <http://dx.doi.org/10.21037/apc.2017.12.03>). The series “Meet the Professor” was commissioned by the editorial office without any funding or sponsorship. Jia-Ying Bai and Helen Seliman report that they are full-time employees of AME Publishing Company (publisher of the journal). The authors have no other conflicts of interest to declare.

Ethical Statement: The authors are accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

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