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Pancreatic theory of relativity…

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Abstract

Pancreatic duct and parenchyma has different benchmarks in nomenclature. Author discuss the proposition to unify the description system of procedures and surgeries within pancreas according to the direction of pancreatic juice natural flow direction.

Key words: pancreas

Pancreas is the organ of digestive tract playing an important role in fat and proteins digestion and glucose metabolism. The gland is composed with two embryo buds. Pancreas is conventionally divided from anatomical point of view on the head, isthmus, corpus and tail with no strict border between this parts. The pancreas has the typical configuration, glandular cells form glands with single small duct joining together form larger one and all are drained into main pancreatic duct going along the whole pancreas. Within the head of the pancreas two ducts exists as a consequence of embryo development. Two ducts has usually separate connection with duodenum.

The lexical definition of proximal and distal terms are descriptive and may wear different meaning. According to Oxford Medical Dictionary [7] proximal means situated close to the origin or point of attachment or close to the median line of the body. Distal is situated away from the origin or point of attachment or from the median line of the body. The
term is applied to a part of the limb that is furthest from the body; to a blood vessel that is far from the heart; and to a nerve fiber that is far from the central nervous system.

Proximal and distal – this are universally used terms describing the position or relation within human body. There are two main benchmarks; central part of the body and direction of flow (blood or other fluids). The first one is used to express the positioning on extremities. The second one is used to describe the circulatory and digestive system relations. An example might be: “artery stenosis with proximal thrombus formation” or “bowel obstruction with proximal distension”. The matter is not so clear concerning the pancreatic gland and pancreatic duct. The gland has typical excretory duct. The description of pancreatic duct occlusion with proximal distension means that the part of pancreas between occlusion and tail is involved. “Dilation of the pancreatic duct proximal to the tumor…” it means left to the tumor or “The abdominal computed tomography scan revealed dilation of the proximal pancreatic duct with an irregular high density calcification shadow located at the head of the pancreas” [5]. On the other hand the resection of pancreas is sometimes called “distal pancreatic resection” it means that left part of the gland is removed [1, 9]. Another description of pancreatic relations is an example: “A 3-cm hypovascular mass accompanying a large distal pseudocyst in the pancreatic tail” by [3], in that paper author refer to the same situation described by Liu et all. The part of pancreatic duct after head resection is called distal pancreatic duct. The resection of pancreatic head is sometime called proximal pancreatic resection like in the paper by Lu et all: “For tumors in the head and uncinate process, the surgeon would palpate the tumor with Kocher’s maneuver to evaluate the risk and possibility of EU, followed by careful dissection of proximal pancreas” [6]. Some authors call Santorini duct as regressed proximal main duct of dorsal pancreatic bud [4]. Latest review paper of pancreatic anatomy give also unclear description: “The ventral pancreatic duct and the distal part of the dorsal pancreatic duct are anastomosed and form the MPD of Wirsung, while the proximal part of the dorsal pancreatic duct becomes the APD of Santorini” [2]. On this few examples is shown dual benchmark related to pancreatic gland. Once the pancreatic juice flow is taken into consideration or on the other hand the position to the central part of the body. Usually the pancreatic juice flow relations are mentioned by the endoscopists, relation to the duodenum is used by surgeons. However the surgical drainage procedures are performed proximally to obstruction [8].

The problem is not only in nomenclature but it practically exists. On the other hand the sentence “Distal pancreatic resection was performed, proximal to obstruction site” or
“Pancreatic head resection was performed and distal part of the gland was anastomosed with jejunal loop” sounds strange. It might be confusing and leads to misunderstanding.

In my opinion it is reasonable to recommend the nomenclature of proximal pancreas to the left part of the gland and distal one, describing the head; according to the pancreatic juice natural flow direction.

References