

Commentary on Ansa pancreatica: Review of the Literature

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Abstract

It has been almost 60 years since the ansa pancreatica was first described by Dawson and Langman in a rather innovative study based on radiographic evaluation of the intrapancreatic ductal configuration in cadaveric subjects. The proposed incidence, based on 120 subjects, was 21%. Undoubtedly a percentage high enough to raise an interest on this anatomic entity. But what does the ansa pancreatica represent?

Keywords: Pancreatic duct • Ansa pancreatica • Pathophysiology

About the Study

It is a reversed s-shaped pancreatic duct arising from a side branch of the major pancreatic duct of Wirsung and ending up at or near the minor duodenal papilla. It has been proposed that this duct formation takes place during the dorsal and ventral pancreatic ducts fusing in the fetus, around the 8th week of gestation [1]. A hypothesis supports that the ansa pancreatica formation serves as a counter measure of an unexpected dorsal duct obliteration.

Writing a review on this topic, my primary goal was to try to present the approximate incidence of the ansa pancreatica in general population, if possible and search for certain statistically significant indications that this anatomic variation plays a role in the pathophysiology of certain pancreaticobiliary diseases [2].

Unexpectedly, when this review was submitted (December 2018) the respective literature was found to be rather poor and heterogeneous. There were only a few radiology oriented studies, based on static (Magnetic Resonance CholangioPancreatography) or dynamic (Endoscopic Retrograde CholangioPancreatography) tests and even fewer studies based on cadaveric subjects [3, 4].

Not only where these studies of non randomized nature, but most of them were also based on operator dependent tests (MRCP, ERCP). Moreover, the vast majority of the ERCP and MRCP results concerned unhealthy individuals. Several case reports connecting the ansa pancreatica with certain pancreaticobiliary diseases were also available [5].

As a result, a clear and bold conclusion could not be reached, as far as the exact incidence of the ansa pancreatica in the general population is concerned.

Not until 2016, a retrospective study had been published to correlate the ansa pancreatica with recurrent acute pancreatitis and

possibly alcoholic pancreatitis in a statistically significant manner. The available clinical data relating the ansa pancreatica with pathological conditions were surprisingly poor [6].

The major disadvantage of this non systematic review is the small amount of heterogeneous and non randomized studies that were enrolled. Unfortunately, statistically significant results could not be achieved [7].

On the other hand, this review highlights the need for conduction of large randomized trials, in order to precisely determine the incidence of the ansa pancreatica in the general population and its role in pancreaticobiliary diseases [8].

A thorough and widely accepted classification of pancreatic ductal anatomy variants should also be proposed.

As a conclusion, this review could serve as a reminder that brief knowledge of human anatomy and its variants is one of the most powerful tools for a health specialist (especially radiologists, internal medicine doctors and surgeons). Not only this, but also the role of a subject's anatomy in the triggering of certain diseases might be underestimated [9].

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