Preduodenal Portal Vein and Polysplenia: A Case Report and Review of Literature

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Background

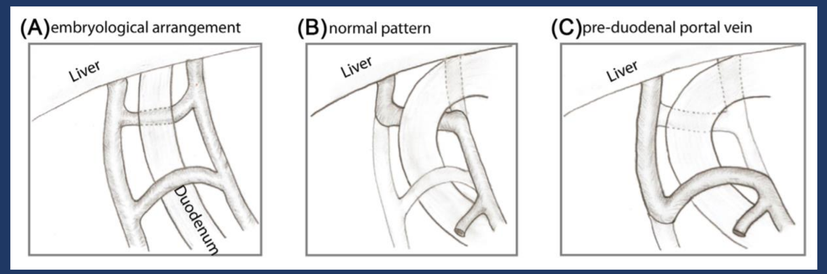
Preduodenal portal vein is a rare anomaly in which the portal vein courses anterior to the second part of the duodenum, rather th. PDPV is often associated with other congenital anomalies, such as polysplenia, malrotation, and pancreatic anomalies.



Patient Presentation

We report an 85 year old male with cT2N0M0 esophageal adenocarcinoma detected with EGD. Patient initially underwent neoadjuvant chemotherapy and was without evidence of malignancy on repeat EGD. He initially declined surgery following his chemotherapy. Surveillance EGD six months later revealed a recurrence of poorly differentiated esophageal adenocarcinoma. A PET scan revealed distal esophageal mucosal thickening without enlarged nodes. CT prior to surgery revealed an anomalous preduodenal and presplenic portal vein and polysplenia. More specifically, the patient was noted to have two spleens. The patient was then scheduled for an Ivor-Lewis esophagectomy.

Intraoperatively during the Kocher maneuver, the portal vein was appreciated tracking anterior to both the pancreas and duodenum. Due to preoperative image review and close attention to detail during the procedure, inadvertent injury was avoided during our mobilization. The procedure was completed without any complications, and the patient recovered well. Final pathology revealed ypT1bN0M0.



Results

PDPV is a rare anomaly with fewer than 100 reported cases in the literature. Since PDPV is usually found incidentally during pre-operative work-up, it may go unnoticed and potentially cause serious surgical complications, such as intraoperative hemorrhage and associated postsurgical complications. Alteration in surgical approaches or strategies, especially in neonatal surgical cases for malrotation, may be warranted. Incidental finding of polysplenia may increase suspicion of a PDPV and other associated anomalies, such as malrotation, pancreatic anomalies, and IVC and azygous anomalies.

Conclusion

Operative complications can be prevented through adequate awareness of PDPV via diagnostic imaging. Future studies may observe the relationship of PDPV on the incidence of gastrointestinal pathologies in adulthood.

References

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