



Figure 1 Abraham Vater by an unknown artist, photo by author.

Three centuries since the discovery of Vater's Papilla

In 1720 Abraham Vater (1684–1751) published the first description of the Papilla at the junction of the common bile duct and the pancreatic duct that today bears his name.¹ It would remain his most clinically relevant discovery, particularly since the introduction of endoscopic papillotomy in the 1970s² and the recognition of endoscopic retrograde cholangio-pancreatography (ERCP)-induced pancreatitis as a significant disease risk.³ The anatomy of the papilla is not uniform among mammals. The rabbit has completely separate junctions of both ducts with the intestine⁴ and the mouse carries no smooth muscle sphincter.⁵ Closest to the human anatomy is probably the American Opossum,⁶ which has therefore been used experimentally to study the mechanisms involved in gallstone-induced pancreatitis.⁷ The papilla of Vater has remained the subject of many investigations in humans,⁸ because its impairment affects diseases of the pancreas⁹ as much as of the bile duct.¹⁰

Abraham Vater (figure 1) was born in Wittenberg as the son of an anatomy professor at the local university, which was founded in 1502 and had recruited Martin Luther to its early faculty. Vater obtained a master-of-arts in his hometown (1706) before studying medicine in Leipzig. After graduation, he spent 2 years on the customary 'Grand-Academic-Tour' and visited Universities in London, Amsterdam and Leiden, where he acquired state-of-the-art anatomical injection methods. In 1711, he returned to Wittenberg and moved through the predetermined academic ranks, with a first salaried position as professor of anatomy (professor tertius), promotion to professor secundus (professor of pathology) and, in 1746, to professor primus (professor for therapy), the highest rank in the medical hierarchy that would nowadays correspond to a professorship in Internal Medicine. At the time, Surgery was not an academic field but taught as a trade by apprenticeship and completed with a master craftsman diploma, the historical reason why British surgeons are still promoted from 'Doctor' to 'Mister' (master) after their Royal-College-Exam. In his leadership position, Vater installed an anatomical museum for his specimens and lectures (including lectures for women, unheard of at the time), but was frustrated by the authorities in Saxony for not providing funds for a university teaching hospital. Such a teaching hospital was already operating successfully (and still is) at the neighbouring and much younger University of Halle.

How much the university in Wittenberg was shaped by the spirit of the 18th century enlightenment is evident by the career of one of Vater's students. Anton Wilhelm Amo received his PhD in 1734 ('de humane mentes apataya'), becoming the first African known to be awarded an academic degree in the Holy-Roman-Empire-of-the-German-Nation. Many inhabitants of Amo's

homeland, the West African Gold Coast, were sold into slavery to supply the American colonies. Amo himself was abducted and sold in Amsterdam, was granted his freedom by the duke of Brunswick, found his way to Wittenberg and later became a prominent German professor of law and philosophy.

Abraham Vater was admitted to the Academia Leopoldina in 1712 (now the German National Academy) and to the Royal Society in London in 1722. He passed away in 1751 after 5 days of jaundice, whether attributable to a disorder of the Papilla that now carries his name, remains undocumented.

When the King of Saxony lost much of his territory to Prussia in the Congress of Vienna, the University of Wittenberg was fused in 1817 with its Prussian neighbour in Halle (the one with the university hospital), where the medical faculty and Vater's anatomical collection were made to move. It passed into the care of Johann Friedrich Meckel (the discoverer of the jejunal diverticulum), was greatly expanded and can still be visited today.

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REFERENCES

- 1 Vater A. Dissertatio anatomica qua novum bilis diverticulum circa orificium ductus choledochi UT et valvulosam colli vesicae felleae constructionem AD disceptandum proponit. *Wittenbergae, lit. Gerdesianus* 1720.
- 2 Classen M, Demling L. [Endoscopic sphincterotomy of the papilla of Vater and extraction of stones from the choledochal duct (author's transl)]. *Dtsch Med Wochenschr* 1974;99:496–7.
- 3 Kochar B, Akshintala VS, Afghani E, et al. Incidence, severity, and mortality of post-ERCP pancreatitis: a systematic review by using randomized, controlled trials. *Gastrointest Endosc* 2015;81:143–9.
- 4 Hirano T, Saluja A, Ramarao P, et al. Apical secretion of lysosomal enzymes in rabbit pancreas occurs via a secretagogue regulated pathway and is increased after pancreatic duct obstruction. *J Clin Invest* 1991;87:865–9.
- 5 Higashiyama H, Sumitomo H, Ozawa A, et al. Anatomy of the murine hepatobiliary system: a whole-organ-level analysis using a transparency method. *Anat Rec* 2016;299:161–72.
- 6 Lerch MM, Saluja AK, Dawra R, et al. Acute necrotizing pancreatitis in the opossum: earliest morphological changes involve acinar cells. *Gastroenterology* 1992;103:205–13.
- 7 Lerch MM, Saluja AK, Rünzi M, et al. Pancreatic duct obstruction triggers acute necrotizing pancreatitis in the opossum. *Gastroenterology* 1993;104:853–61.
- 8 Lerch MM, Weidenbach H, Hernandez CA, et al. Pancreatic outflow obstruction as the critical event for human gall stone induced pancreatitis. *Gut* 1994;35:1501–3.
- 9 Menges M, Lerch MM, Zeitl M. The double duct sign in patients with malignant and benign pancreatic lesions. *Gastrointest Endosc* 2000;52:74–7.
- 10 Hernández CA, Lerch MM. Sphincter stenosis and gallstone migration through the biliary tract. *Lancet* 1993;341:1371–3.