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History of the Pelican in Dentistry

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Abstract

The Pelican, an essential tool integral for surgeons, barbers, mountebanks, and itinerant dentists, was pivotal in extracting problematic teeth from the early Middle Ages through the 19th century.

Keywords

Keywords: pulpitis, caries, toothache, surgery

The ultimate resolution to a toothache lay in extracting the affected tooth. However, given the limited understanding of dental anatomy in the early Middle Ages, practitioners believed that merely breaking off the crown portion of a tooth lodged in the oral cavity sufficed. Consequently, tools were developed for the specific purpose of removing the crown of a problematic tooth, with the Pelican standing out as a favored instrument, named for its beak-like appearance.

Guy de Chauliac, a surgeon from the University of Montpellier, pioneered the Pelican as a tooth-extraction instrument, as documented in his work in 1365. Chauliac's text includes only a short section on dental surgery, and no illustration of the pelican was available until the 1585 edition. They are copies of Ambroise Paré's 1575 illustrations. Paré (1510–1590), the chief surgeon of the French court (*Premier Chirurgien du Roi)* and instrument developer, detailed the careful utilization of the Pelican in his writings, *Oeuvres* (1). He emphasized soft tissue protection, highlighting the two-handled Pelican's convex and densely notched support end for stabilization. The connection between the support and working ends featured a rotating ring.

Hieronymus Brunschwig (c. 1450–c. 1512), a Strasbourg surgeon, authored significant works on surgical and pharmaceutical distillations, including the *Liber de arte distilland*. His surgical book, *Buch der Chirurgia* (1497), showcased approximately 25 instruments, including the Pelican (2).

Leonardo Botallo (1530-c.1587) introduced finger-bent parrot and crow tube root pliers. His two-clawed Pelican aided in the extraction or eruption of teeth with varied shapes, featuring split beaks at the ends of both arms. The stem and handle boasted decorative elements. Jacques Guillemeau (1550–1613), Paré's distinguished student, published *La chirurgie Françoise* (1594), the first book on operative surgery. He provided drawings of instruments in it, encouraging skilled blacksmiths to replicate them precisely (3).

Illustrated works from the 17th century by Hildanus (1560–1634) and Woodall (1569–1640) were notable (4). Scultetus's (1656) *Armamentarium chirurgicum* (5) presented all known instruments and operating

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scenes, showcasing relative sizes and step-by-step operations - akin to modern books (6). Pierre Fauchard, employing the Pelican, addressed the challenge of protecting soft tissues by placing skin or rags under the support part.

In 1782, J. A. Brambilla compiled existing equipment in *Instrumentarium chirurgicum* (7), introducing a novel instrument for tooth eruption featuring a hooked stem fixed with a screw thread in a thick handle designed to correct differences in tooth size. Pelicans remained in use until the middle of the 19th century when John Tomes, the "Father of modern dental surgery in Britain" (1815-1895), improved the anatomically accurate and specialized forceps for extractions, rendering pelicans less useful.

References

1. Paré A. Oeuvres. N. Boun, Paris, 1628. https://www.google.com/books/edition/Les_Oeuvres_d_Ambroise_Par%C3%A9/wr8-AAAAcAAJ?hl=en&gbpv=1&dq=ambroise+pare,+oeuvres&printsec=frontcover
2. Brunschwig H. *Dis ist das Buch der Cirurgia. Hantwirckung der Wund Artzney*. 1497. https://www.google.com/books/edition/Dis_ist_das_Buch_der_Cirurgia/A8YYGtFsw28C?hl=en&gbpv=1&dq=Hieronymus+Brunschwig+1497&printsec=frontcover
3. Guillemeau J. *Le chirurgie françoise recueillie des antiens médecins et chirurgiens*. Ches Nicolas Gilles Rue Sainct Iacques. 1594. https://www.google.com/books/edition/La_chirurgie_Fran%C3%A7oise_recueillie_des_a/kBFmAAAAcAAJ?hl=en&gbpv=1&dq=Guillemeau+Jacques.++Le+chirurgie+fran%C3%A7oise+recueillie+des+antiens+m%C3%A9decins+et+chirurgiens.+1594&printsec=frontcover
4. Woodall, John: The Surgeons Mate. 1617. https://wellcomecollection.org/works/fqz2t4zv/items
5. Scultetus J. *Cheiroplotheke* ... Armamentarium chirurgicum, Hagae-Comitum: Ex officina Adriani Vlacq., 1656. https://books.google.com/books?id=hrAUAAAAQAAJ&printsec=frontcover&dq=scultetus+armamentarium+chirurgicum+1656&hl=en&newbks=1&newbks_redir=0&sa=X&ved=2ahUKEwiayLX1gJ_mAhVsUd8KHRUJDysQ6AEwAnoECAMQAg#v=onepage&q=scultetus%20armamentarium%20chirurgicum%201656&f=false
6. Kirkup, John: The Evolution of Surgical Instruments. An Illustrated History from Ancient Times to the Twentieth Century. Norman Publishing, California, 2006.
7. Brambilla Giovanni Alessandro Ferdinand Landerer Bristol Royal Infirmary Library and University of Bristol Library History of Medicine Collections. 1782. *Ioan. Alexand. Brambilla ... Instrumentarium Chirurgicum Militare Austriacum*. Vindobonae (Vienna): Litteris Schmidtianis.

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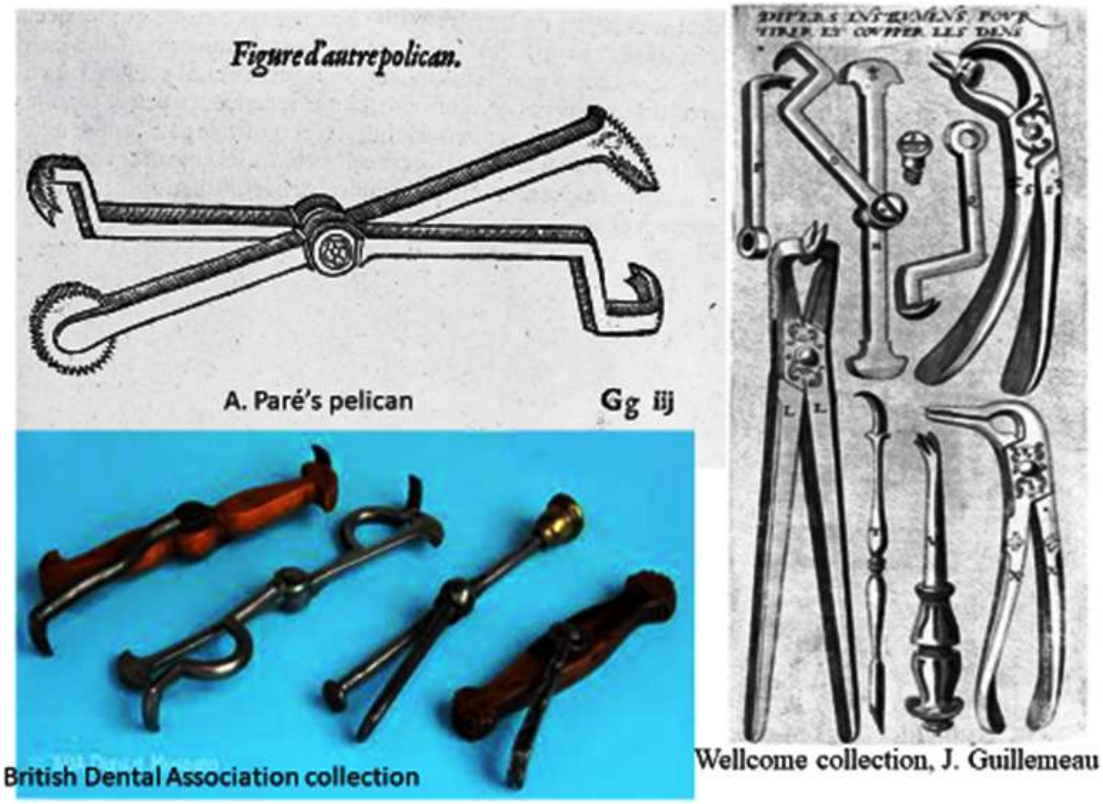

Figures: pelicans from different ages