Dr. Thomas Wharton’s Eponyms: Wharton’s Duct and Wharton’s Jelly

**Summary**

Thomas Wharton, English physician and anatomist, 1614-1673. In 1656 he published a work (Adenographia) describing many glands of the body, including the submandibular gland for the conveyance of saliva. It was the first systematic account of the glands of the human body. Wharton himself discovered the duct which carried saliva from the sub-maxillary gland to the mouth, and studied the umbilical cord. He was the first to name the thyroid and jugular glands. Thomas Wharton’s Adenographia: first published at London in 1656: translated from the Latin by Stephen Freer with an historical introduction by Andrew Cunningham. In our article, We’ll give Dr. Wharton’s short biography and his eponyms including Wharton’s duct and Wharton’s jelly.

**Key Words:** Thomas Warton, His Eponyms

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**Short Biography of Dr. Thomas Wharton**

[English Anatomist-Born August 31, 1614, Winston-on-Tees, Durham county; Died November 15, 1673, London]

Thomas Wharton was the son of John and Elizabeth Hodson. He studied at Pembroke College, Cambridge, Trinity College, Oxford, and at Bolton, Lancashire. A supporter of the republican cause, Wharton obtained his M.D. at Oxford on May 7, 1647, after the city had surrendered to Cromwell’s army. Thereafter he had a medical practice in London (St. Thomas’s Hospital) during the Great Plague of 1665 and he worked with John Bathurst, Oliver Cromwell’s physician and was elected a fellow of the Royal College of physicians on December 23, 1650. Wharton served as one of its censors six times between 1658 and 1673 and gave the Goulstonian lectures in January 1654.

In 1656 he published, at his own expense, his Latin treatise Adenographia, “a description of the glands of the entire body,” which he dedicated to the College of Physicians. In Adenographia Wharton gave the first thorough account of the glands of the human body, distinguishing them from viscera and classifying them as either excretory, reductive, or nutrient. He provided a valuable description of the adrenal glands and the first adequate account of the thyroid gland, to which he gave its present name. He discovered and described the duct of the submaxillary salivary gland (Wharton’s duct), and accurately explained the role of saliva in mastication and digestion. In his discussion of the reproductive glands, Wharton corroborated...
Harvey’s account of the placenta and furnished the original description of the mucoid jelly of the umbilical cord (Wharton’s jelly). He differentiated the viscera from the glands and explained their relationship, describing the spleen and pancreas.

He also provided the first adequate account of the thyroid and gave it that name. He explained the role of saliva in mastication and digestion but considered that the function of certain glands, such as the adrenals and the thyroid, was to restore to the veins certain humors that were not useful to the nerves, and that one function of the thyroid was “to fill the neck and make it shapely”.

Thomas Wharton in giving a comparative account of the glands took an important step by denying the old and persistent idea that the brain was a gland which secreted mucus. (However, he continued to believe that tears originated in the brain).

Much of Wharton’s research was performed on animals: he mentions dissection of calves, and Izaak Walton published his description of an anglerfish (Lophius). Wharton’s son Thomas II became a clergyman, but both his grandson George and great-grandson Thomas III, became prominent.
London physicians. Dr. Wharton died in 1673.(1-8).

**Dr. Thomas Wharton’s Eponyms**

Thomas Wharton discovered the duct of the submaxillary salivary gland and the jelly of the umbilical cord, both of which are named for him.

**Wharton’s duct (Ductus submandibularis)**

The paired submandibular glands are located inferior to the base of the tongue in the posterior-lateral part of the floor of the mouth. Wharton’s Duct is approximately 5 cm in length and runs anterily to open into the floor of the mouth on the summit of the sublingual papilla lateral to the frenulum of the tongue. The submandibular glands are mixed seromucuous in type. The secretomotor innervation of the submandibular glands is from the facial nerve (VII) via the pterygopalatine ganglion.

**Wharton’s Jelly**

A gelatinous intercellular substance which is the primitive mucoid connective tissue of the umbilical cord. It is rich in hyaluronic acid. It is the soft, jellylike, homogeneous intercellular substance of the umbilical cord; it gives the reaction for mucin and contains thin collagenous fibers which increase in number with the age of the fetus (9-12).

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