1882

1881-1883

Mycobacterium tuberculosis is an obligate pathogenic bacterial species in the family Mycobacteriaceae and the causative agent of tuberculosis.

First discovered in 1882 by Robert Koch, M. tuberculosis has an unusual, waxy coating on its cell surface (primarily due to the presence of mycolic acid), which makes the cells impervious to Gram staining; M. tuberculosis can appear Gram-negative and Gram-positive in clinical settings.

The Ziehl-Neelsen stain, or acid-fast stain, is used instead. The physiology of M. tuberculosis is highly aerobic and requires high levels of oxygen. Primarily a pathogen of the mammalian respiratory system, it infects the lungs. The most frequently used diagnostic methods for tuberculosis are the tuberculin skin test, acid-fast stain, and chest radiographs.

The M. tuberculosis genome was sequenced in 1998

As an alternative to the transcranial route the transsphenoidal approach was developed simultaneously in the first decade of the 20th century in the United States and in Europe, in particular in the Austrian monarchy. One reason that Vienna became the cradle for the minimally invasive approach to pituitary tumors using an endonasal transsphenoidal approach was among others due to the basic and detailed anatomical studies of the paranasal sinuses performed in Vienna by the Austrian anatomist and Violin virtuoso Emil Zuckerkandl (1849–1910). His main work “On normal and pathological anatomy of the paranasal sinus and its pneumatic adnexes” in 1882 was the anatomical presupposition for the Viennese ENT surgeons to successfully develop minimally invasive endonasal approaches to pituitary tumors [1)].

1)
Zuckerkandl E. Normale und pathologische Anatomie der Nasenhöhlen und ihrer pneumatisierten Anhänge. Vienna, Austria: Braumüller; 1882.