

History of Forensic Medicine – the Second part

The Autopsy in the Middle Age and the Renaissance

Hirt, M.,¹ Kováč, P.²

¹Institute of Forensic Medicine, Medical Faculty of Masaryk University and St. Ann's University Hospital, Brno, Czech Republic.

²Institute of Forensic Medicine, Comenius University, School of Medicine, Bratislava, Slovak Republic

During the 13th and 14th Centuries AD, the universities became the centers of European knowledge. They arose through the initiative of cities (in Italy), the Church (in France) and, occasionally the ruler (as in the case of Prague). Most universities had four faculties, the medical faculty was crucially important. In the vast majority of these medical faculties, however, lectures were mostly in the form of reading the writings of old medical authorities, or sometimes as an explanation by the professor of certain passages, and a scholastic disputation between the professor and the students about selected quotes from medical scripts. Most respected, at the time, were the works of Galenos, sometimes Hippocrates, Avicenna and some Byzantine authors. Acquiring own experience through autopsies was almost, if not entirely, impossible.

With the Edict entitled „*Ecclesia abhorret a sanguine*“ (The Church Abhors Blood) the Church Council in the Tours in 1163 forbade monks, the only properly educated individuals of the time, from carrying out surgical interventions and human corpses were declared untouchable. In the year 1299 AD, Pope Boniface VIII issued the „*De Sepulturis*“ (On funerals) bull, which was directed against the custom of boiling human corpses prior to transporting them to the place of burial. A dogmatic interpretation of the bull led - in its consequences - to the abolition of autopsies, because anatomists to ease the separation of bones from other tissues used the same process of boiling. This led to stagnation in the learning process.

The exception in this case was first and foremost the medical faculty of Bologna where, despite the numerous bans of the Church, the anatomical autopsy of human corpses was practiced since the faculty's very beginning. In 1316, Mondino dei Liucci (ca. 1270-1326) (Fig. 1), a Bolognese anatomist, wrote the first real textbook of anatomy, „*Anatomia Mundini seu*

Anatome omnium humani corporis interiorum membrorum“ (The Anatomy of all Internal Parts of the Human Body – Fig. 2). Mondino's textbook spread in many hand-written copies until its printed publication in Pavia in 1478. In fact it was the only permitted textbook in Pavia. From 1306 onwards, Mondino gave many lectures about the human body. He would discuss the scientific facts inherited from Galenos and a surgeon would demonstrate them to the students on corpses. At the time, there was a rule in Bologna, which limited the number of spectators during an anatomical autopsy to twenty in the case of a male corpse and thirty in the case of a female corpse. Mondino is to be credited for the fact that after many centuries (since the times of the Alexandrian school), anatomical studies were once again carried out on human corpses and not on animals.

In 1345 physician Guido de Vivegnano published in France text describing course of autopsy. According some reports in 1410 the Catholic Church itself ordered an autopsy on Alexander V. (Peter Philarges cca.1339 - May 3, 1410, antipope of the Pisan line from June 25th 1409), to determine whether his successor (Baldassare Cossa, antipope John XXIII) had poisoned him. The medical school in Bologna added the dissection of the human body to its syllabus in 1405 with the aim of anatomical demonstrations. Few years later, in 1429, the University of Padua introduced the same policy. Pontificate of pope Sixtus IV (Francesco della Rovere, born 21st July 1414, elected August 7th 1471, died August 12th 1484) who studied philosophy and theology with great success at the University of Pavia, and later lectured at Padua, Bologna, Pavia, Siena, and Florence was period in which autopsies started to become part of physician's education. In 1482 Sixtus IV granted to the University in Tübingen permission to carry out autopsies as long as the local church authorities would not disagree Roughly ten years



Fig. 1 (<http://pacs.unica.it/biblio/storia3.htm>)

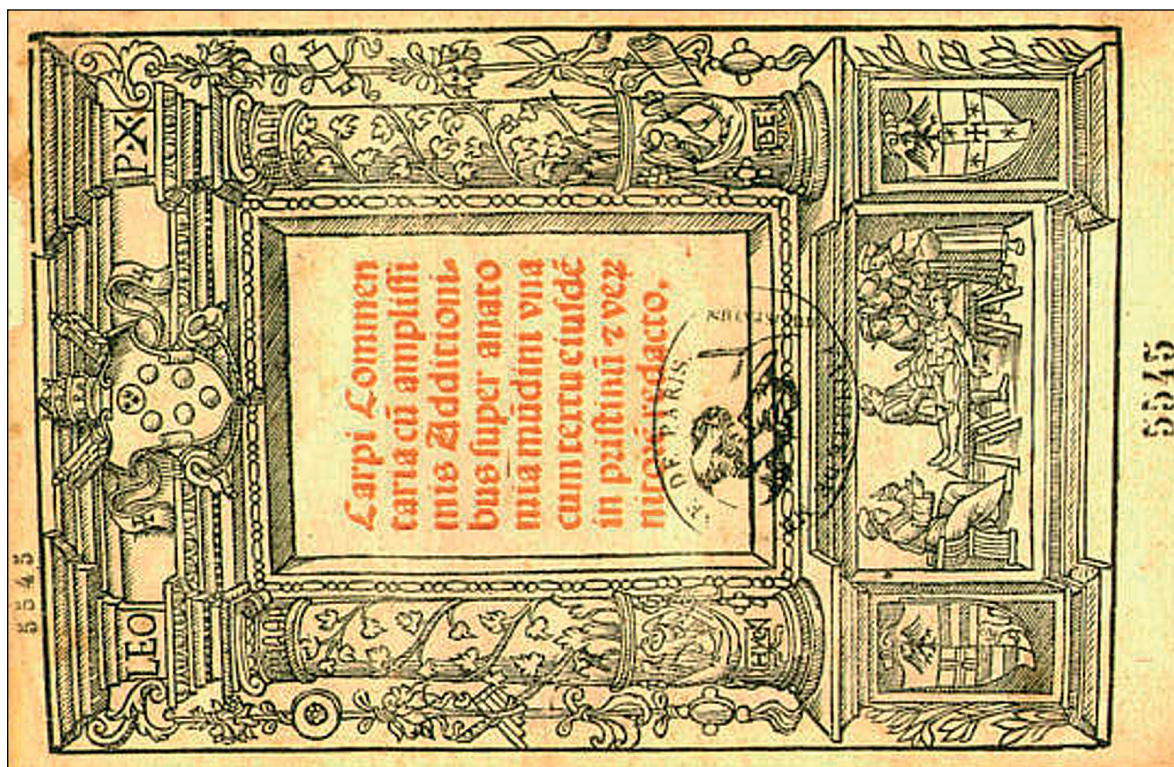


Fig. 2. (http://www.bium.univ-paris5.fr/expo/table_ill_chro1.htm)

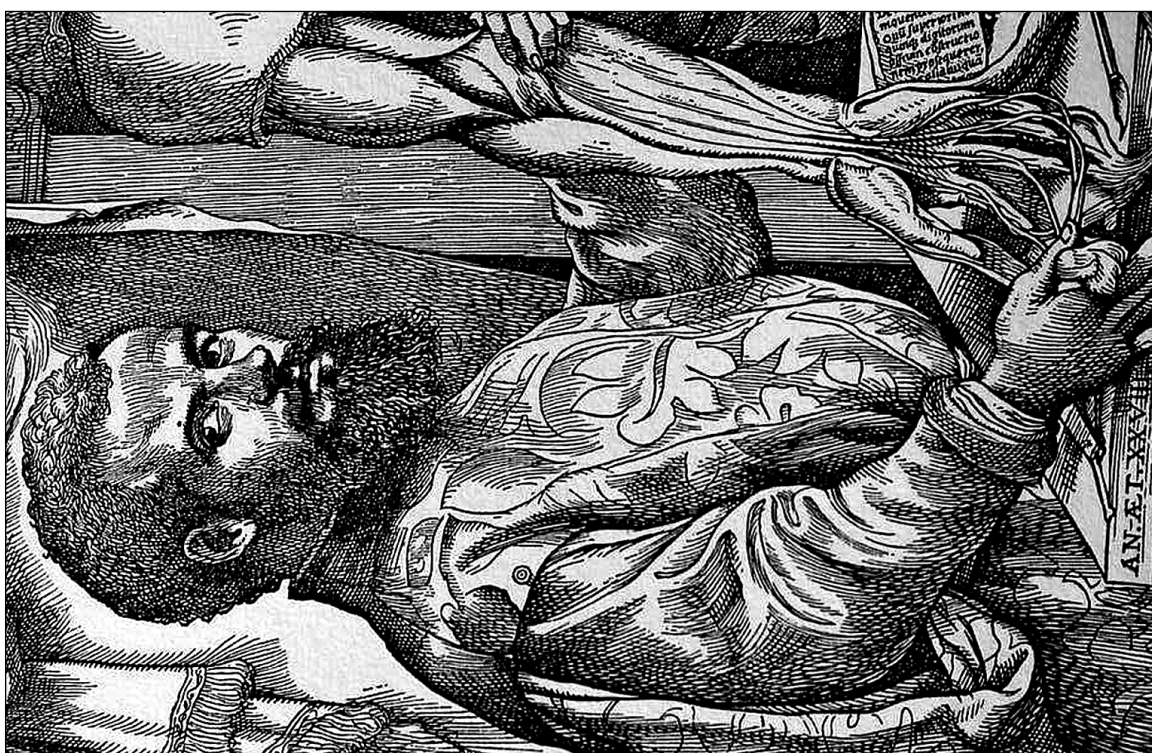
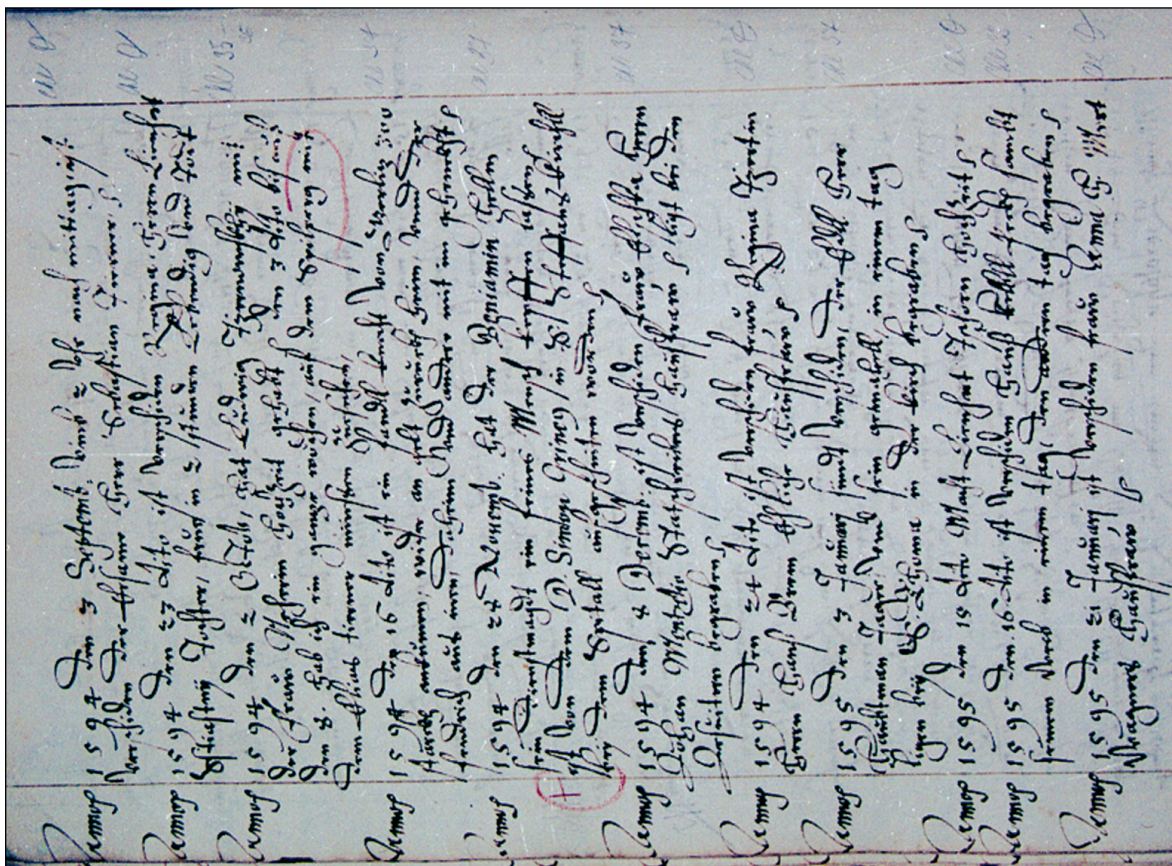


Fig. 3
(http://deutschesmuseum.de/hib/entdeckt/alt_buch/img/port.jpg)
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Fig. 4
(<http://www2.comune.bologna.it/bologna/archigin/gallerie/vetrina14.htm>)



**Fig 5. Hirt, M.: The First Public Autopsy on the Territory of Czechoslovakia?
Cs. Patol., 28, 1922, 3, pp. 186-189**

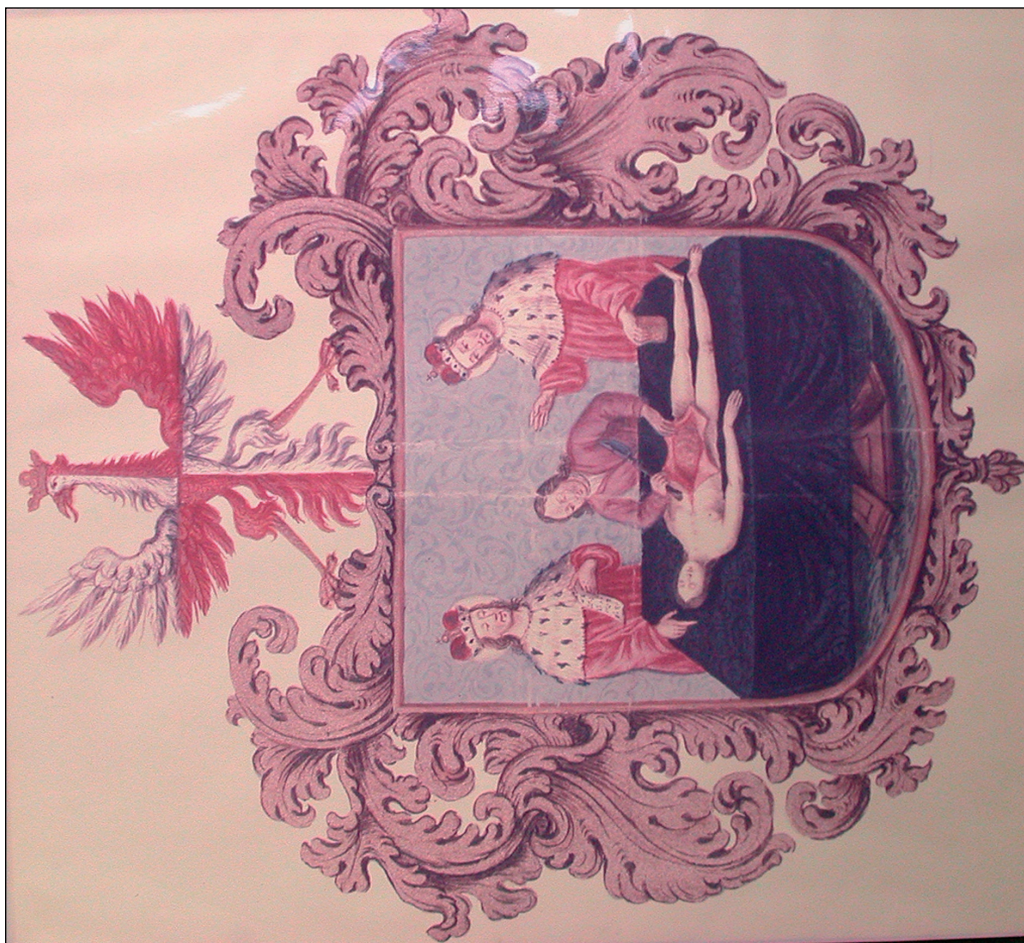


Fig 6. Hirt, M. et al.: The Beginnings of Autopsy in the Region of Czech Kingdom in the 16th Century. in: Advances in Forensic Medicine, in: B. Jacob, W. Bonte, Volume 2 Clinical Forensic Medicine, Verlag, Dr. Koster, Berlin, 1993, ISBN 3-89574-109-4, pp. 368-9.

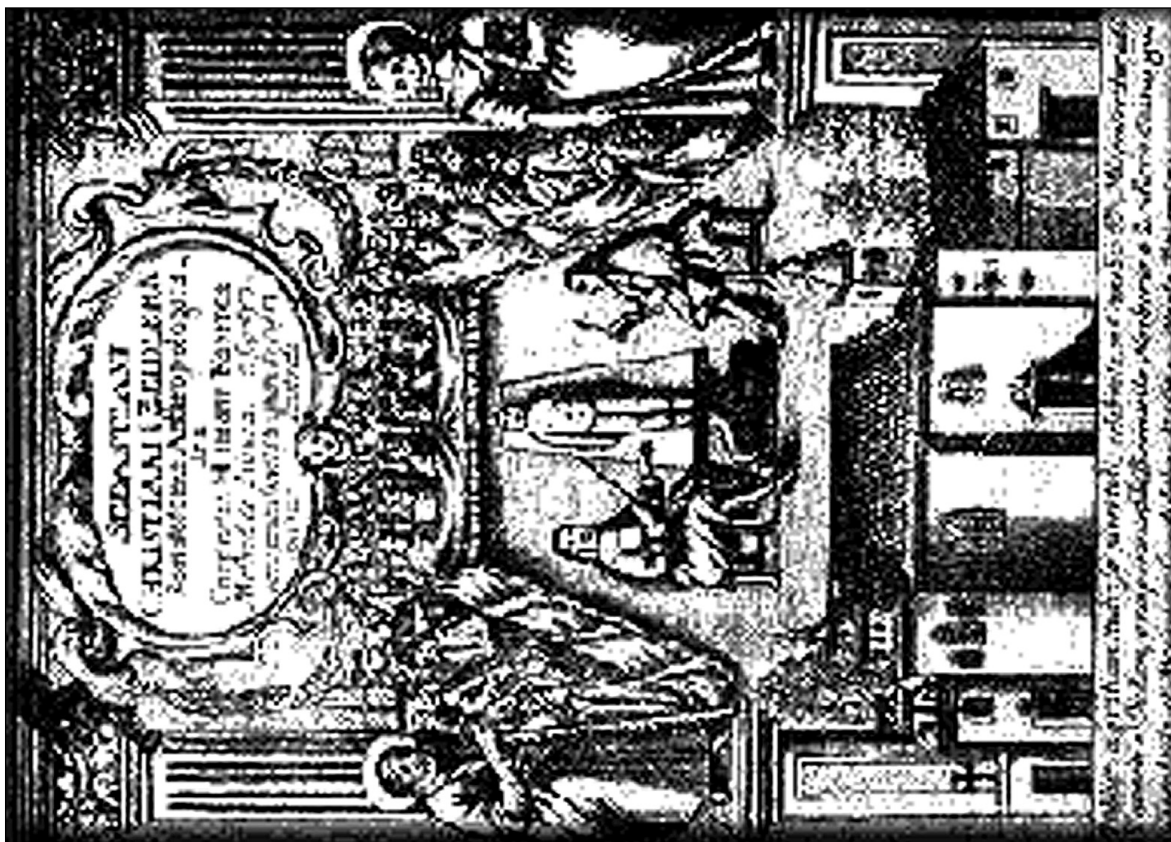


Fig 8. (<http://ottazlosu.wz.cz/rudolf2.htm>)



Fig 7. (<http://ottazlosu.wz.cz/rudolf2.htm>)

later, the prior of the Santo Spirito church in Florence allowed the young artist Michelangelo Buonarroti to perform an autopsy. At that time, deep knowledge of human anatomy was necessary for artists only. Until today, we can see results of these anatomical skills in works of Raffael, Michelangelo, Leonardo da Vinci and others great artists of the Renaissance.

Andreas Vesalius (Fig. 3), who was born on the night of 31st December 1514 in Brussels, brought the revolution in understanding and especially in anatomical skills. He studied medicine in Paris from 1533 till 1536 when Vesalius was forced to return home due the war between France and the Emperor of the Holy Roman Empire Karl V. Vesalius graduated in Padua in 1537 and in the same year, he became the professor of anatomy at the medical faculty of the university in Padua. In the same time he met artist Jan Stephen van Kalkar who later became illustrator of Vesalius's works. In 1543 he published "*De humani corporis fabrica libri septem*" (Fig. 4) in Basel, which started brand new era in medicine. This work includes many excellent didactic drawings by Kalkar and a very detailed yet understandable description of the human body. Vesalius corrected over two hundred errors, which had been committed by Galenos. Illustrations used in *Fabrica* are so powerful that many copies started to be made almost instantly. Vesalius' work was published about 25 times and gave birth to numerous imitations. Original wooden plates used for print of illustrations survived centuries in almost perfect condition until the last months of WWII. They were stored in the University of Munich and perished during allied bombing on July, 16th 1944.

The 16th Century marked a great expansion in anatomical knowledge. An essential part of every professor's lecture, was an autopsy of a human corpse. Special lecture rooms were built for the purpose of teaching anatomy at medical faculties, called "*theatrum anatomicum*", in Padua, Königsberg, Leipzig, Breslau, Leiden, Heidelberg and Copenhagen. In the year 1565, the position of "*regional doctor*" was created in Moravia, in the Czech Crown Lands. In Brno, one of these was Simon Grinaeus, student of professor Baughin (University of Basel). Dr. Grinaeus performed the first autopsy in Brno in

the chapel of St. Stephen on 28th October 1594. The authentic manuscript, entitled "*Chronicles of Brno City*", preserved in the city archive, shows the folio no. 19r (Fig. 5). It contains the following entry, written in the German of the period: "*Anno 1594 den 28. Novembris, hat der Benjamin Heller sein dienstmagdt ein feines Mensch, keppfen lassen, ist von dem D. Simon Grineus in S. Steffans kirchll bey dem Spital aufgeschnitten worden.*" (In the year 1594, on the 28th November, Mr. Benjamin Heller ordered his maid, a pretty girl, to be beheaded. She was then dissected by Dr. Simon Grinaeus, in St. Stephen's chapel by the Hospital.). The emblem used by Brno's surgeons and bath-keepers (Fig. 6) contains a picture of an autopsy of a woman, and there is no reason not to believe that it was the abovementioned autopsy-giving rise to this emblem.

In 1600, between the 8th and 12th June, Ioannes Jessenius de Magna Jessen (Fig. 7) performed a public autopsy of a man in Prague. He published "*Johannis Jessenii a Jessen, Anatomiae Pragae, Anno MDC ab se solemniter administratae historia*" (Ioannes Jessenius of Jessen's History of an Autopsy Carried out in Prague in the Year 1600 – Fig. 8), in Wittenberg. At the time, he was the professor in Wittenberg. Four years later, he performed an autopsy of a woman and a child in Prague. Alas, also in Prague, he was sentenced to death and executed in 1621.

The universities of Middle Age founded in 13th and 14th century, became places where human autopsies were reintroduced to the education of future physicians. Autopsies became more common in the 15th century and since the 16th century even the Catholic Church generally accepted autopsy. This Renaissance breakthrough started a systematic approach to the study of human pathology. In its consequence, the Renaissance also contributed to the development of forensic medicine as a stand-alone science.

Prof. MUDr. Miroslav Hirt, CSc.
Ústav soudního lékařství
Tvrdeho 2a
602 00 BRNO
tel.: 420 543 426 511
fax: 420 543 426 519
E-mail: hirt@med.muni.cz