

Andreas Vesalius: Background information

Vesalius was born into a medical family and was encouraged from an early age to read about medical ideas and practice. He went to Louvain University from 1528 to 1533 when he moved to Paris. Vesalius returned to Louvain in 1536 because of war in France. He was anxious to continue his study of anatomy and made moves to acquire a Skeleton to enhance his understanding.

The major developments that Vesalius made in medical theory came as a result of his work in Padua. He moved here after falling out with his professor in Louvain. In Padua Vesalius conducted his own dissections: unheard of at the time, and made detailed notes and drawings. Many who felt that drawings had little place in a scientific field frowned upon this practice. He continued however and in 1538 published a collection of labelled drawings entitled 'Tabulae Sex'. These drawings demonstrated that he understood some of the faults in Galen's work, yet he made no open criticism of Galen's theories. His drawings in fact contradict themselves: one picture show a liver with 5 lobes, as Galen had suggested, and another has two: as found in Humans.

Vesalius then produced his letter on Venesection, which is the bleeding of patients. In this he criticised doctors who bled on the opposite side of the body and only let a small amount of blood out. He provided drawings that showed why he, and Hippocrates and Galen, were correct to advocate bleeding the infected area and removing a larger amount of blood. To justify this he produced drawings showing how the veins were connected and used a scientific argument to justify his logic.

Vesalius' next piece of work was of monumental proportions. His book 'The fabric of the Human body' published in 153 was a comprehensive study of the human body. It contained anatomical drawings of all parts of the body and offered many new conclusions as to the way of treating disease. The book showed how muscle is built up in layers, highlighted errors in previous theories of anatomy and made, for the first time, good use of drawings to support the argument being presented. Vesalius was anxious to ensure the accuracy of his book and personally oversaw the production of the plates that were used for his illustrations.

The book was a major break through in medical history for a number of reasons. It developed the use of technical drawings and disproved theories that had been in place in Europe for many hundred of years. Despite the clarity of his work, argument and presentation however, many people chose to dispute his theories at the time: convinced that the works of Galen were correct.

Activities

- Find three developments or changes to medical thinking or practice that Vesalius was responsible for.
- Put these in order of importance.
- Explain why you think that this is the correct order of importance.

- Which of Vesalius' findings would be most opposed at the time and why do you think this?
- Which of Galen's theories did Vesalius disprove?
- Why were Vesalius' drawings so important to future medical developments?

Examination style questions

- Briefly describe the main features of Andreas Vesalius' work. (5)
- Could Vesalius have made these changes prior to the renaissance? (10)

Sample answers to examination style questions

1) Vesalius work was based on drawings and writing books. He made some suggestions that Galen was wrong about anatomy. He worked in Padua and fell out with his professor over how to bleed patients. His work is considered to be very important.

2) Vesalius' work focused largely upon the anatomy of the human body. He used dissection and human skeletons to establish what the internal workings of the body looked like and made detailed drawings of these. He published these drawings along with his notes and made use of the new printing technology that was available at the time of the renaissance. Vesalius' work is noted for being a turning point in medical history. It identified weaknesses in the theories of Hippocrates and Galen, his theory regarding Septum for example. His works also provided detailed, and accurate, drawings and explanations of the workings of the human body: which was another important development in medicine.

Make a note of what positive characteristics there are of each answer.

Make a note of anything that is lacking from these answers.

Now do the same for your own response.

Does it:

- Mention his major works?
- Explain what developments he made?
- Suggest the significance of his works?
- Mention other developments that allowed him to make these advances?

If it DOES NOT mention these, the answer could be improved.

Write your response again bearing the above pointers in mind.