



Review Article

The Horse Catalyzed Birth of Modern Veterinary Medicine in 18th-Century France



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ABSTRACT

The central role and significant importance of the horse for the development of Western society has been described and outlined by several authors in the (recent) past. Although it might seem logical that this mythical animal contributed to the establishment of the veterinary profession, the reality is slightly more complicated. During the 16th to 18th century, the role of the horse became increasingly prominent, not only as a draft animal and important military “tool” but certainly also as a recreational partner in the budding art of equitation and hunting. Coexisting along with the horse for many hundreds of years was the guild of blacksmiths, who traditionally took care of both horseshoeing and supplying general first-line care. However, a new more heterogeneous group of actors arose, consisting of noblemen, physicians, lawyers... who began to educate themselves in the art of equitation and associated horse-related subjects in the broadest sense. This resulted in an unavoidable clash occurring against the background of a much larger confrontation between “old and new” that ultimately resulted in the French Revolution. This article briefly describes the historical background and actors of this era and how the horse finally catalyzed the political convictions to establish formal veterinary training in 18th-century France.

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1. Introduction

Summarizing the history of the veterinary profession is quite a challenge. Numerous books have been written on this subject, making it virtually impossible to fit even the well-documented early history into one paragraph [1,2]. However, to finally understand the prevailing atmosphere during the critical period of 18th century France and the background against which the first veterinary schools were founded, we do need to point out some of the main milestones and significant events of early veterinary practice [3].

As stated by Diamond [4], animal domestication is an extremely complicated process that evolved in different ways at distinct places around the world. After the dog,

some farm animal species were domesticated approximately 10,000 years ago, when a nomadic lifestyle evolved into settlements where sheep and goats were kept to provide food, milk, and wool. The first evidence of veterinary medicine goes far back to the region that is now Egypt, an area at the time, very rich in cattle. A papyrus role found by Flinders-Petrie in 1888 and dated back to 3,000 to 2,200 BC mentions organ failure, colic, and bloodletting therapies. This Eastern and Egyptian knowledge was inherited by the Greeks, among whom Xenophon and Hippocrates were the most important protagonists (fifth century BC), and they influenced medical thinking patterns until the 20th century [5]. The latter developed the so-called “humoral pathology” principles based on the four elements “fire, water, air and earth” and their specific properties “heat, cold, drought and damp”. These elements were connected to the four body fluids: blood, phlegm, black, and yellow bile. It was believed that good health could only exist when these four fluids were in perfect balance.

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Disease was considered to be the consequence of an imbalance, and this caused “sharp fluids” to materialize inside the body, which in turn resulted in fever. These “caustic” fluids needed to be evacuated from the body, which is why numerous of abortive therapies were developed, such as bloodletting and the use of diuretics, emetics, clysters, and sweat-inducing therapies. The current basics of (veterinary) medicine such as anatomy and physiology were mainly absent, and empiricism was the most important lead in diagnosis and therapy. A third important Greek author was Aristotle (384–322 BC), who widely is considered to be the father of comparative anatomy. Because the Greeks only dissected animal cadavers, their subsequent extrapolations to humane anatomy often caused confusion. Although Aristotle had a good understanding of the general body functions, he lacked insight in the functions of the different organ systems. He appreciated the role of the heart as a central organ but had no idea on the function of the cardiovascular system.

Subsequently, Greek slaves passed on a number of medical concepts to the Romans when their retired soldiers started a sedentary life as farmers. General attention for agricultural sciences increased considerably as evidenced by the work of Varro (“*De Re Rustica*,” 116 BC), Plinius (first century), and Celsus. The most influential author from this era was Galen (130–201), who promoted his Galenic principles (largely based on Hippocrates) that would continue to influence medical thinking until the 19th century. He strongly promoted the so-called “poly-farmacy” (Galenism, “Galenica”), prescribing the use of complicated recipes for the preparation of pharmaceuticals. During the first century AD, the Roman agronomist Columella published his “*Re Rustica*” in which he mentioned “*la medicina veterinaria*,” veterinary medicine concerning “*bestia veterinaria*,” the beasts of burden such as cattle and oxen. He also introduced the expression “*veterinarius*” for the first time in history. Other Latin authors were Salonijs [6] and Vegetius, a Roman aristocrat, who published the most complete work on veterinary medicine in antiquity (fourth century), in which he described the symptoms of laminitis and colic in the horse and advised the use of “poly-pharmacy” in his “*Artis Veterinariae Sive Digestorium Mulomedicinae Libra IV*”. After the fall of the Roman Empire, many of the writings of the Greek hippiatrists were compiled into what is called the “*Hippiatrica*,” a handwritten codex that was found in a Hungarian monastery, probably after being abandoned there by the Turks. The first translation of the codex into Latin was published by the French physician Jean Ruelle (Ruellius) in 1530. However, at this time, the center of gravity of veterinary medicine slowly moved to the East where the Arabs further developed medicine, pharmacy, and chemistry and became the heirs of Greek veterinary knowledge.

Only a few publications are known from the Middle Ages, with authors such as Jordanus Ruffus (equerry or “*Marescallus*” at the court of Frederic II, 1212–1250) and Laurentius Rusius (1228–1347), an Italian hippiatrist in Rome. His “*Hippiatria Sive Marescalia Laurentii Rusii*” was the first ever-printed veterinary work (1531). The most important animal species deserving of medical attention during the Middle Ages were the horse, dog, and... falcon,

all of which were strongly connected with hunting, as demonstrated by the “*Livre de Chasse*” (book of hunting) of Gaston Phoebus (1389). The first printed book on equine veterinary medicine was published in Venice in 1472 from an unknown author.

As can be expected, most of the previously cited writings or early printed books were only available at the local level because book printing had not yet been scaled up to produce large quantities of a single work. Most of the books were concentrated in libraries at monasteries or in the hands of wealthy individuals. In addition, few people could actually read not to mention that nearly all books were published in Latin. Thus, the dissemination of information and knowledge was slow. A beautiful bibliography was recently published by Dejager [7], based on his private collection covering approximately 365 publications from the 15th up to the 19th century.

2. “Hippiatrics” and the Old Masters of the 16th up to the Beginning of the 18th Century

The 16th century was characterized by both enormous scientific progress and great advances in the field of book printing, which broadly increased learning and allowed for faster propagation of new ideas. The Antwerpian Christoffel Plantijn scaled up the art of book printing to a level that allowed for the mass production and replication of printed copies of important books. During that century, approximately 50 books from different scholars were published on veterinary medicine; however, they mainly focused on the horse. Philologists, physicians, equerries, noblemen, and politically important men, everyone started publishing books on equine medicine. As far as the matter of the substance was concerned, the works were all very much alike with little new material being published. However, Andreas Vesalius caused a revolution in 1543 when he published his extraordinary tome known as “*De Humani Corporis Fabrica Libri Septem*” in Brussels. The work was not only a landmark study on human anatomy but also an artistic work of high esthetic quality and would inspire many authors, the most famous of whom, Carlo Ruini (1530–1598), was one of the most noted horse anatomists of the 16th century. Ruini’s “*Anatomia del Cavallo*” (1590) was the first book to focus exclusively on the structure of a species other than man, and its splendid images were often plagiarized for years to come. In 1599, the French physician Jean Héroard, inspired by Vesalius and Ruini, wrote his “*Hippostologie*”. It was the same Héroard who introduced the term “*vétérinaire*” in France and was referred to as “*Médecin en l’art vétérinaire de la grande écurie du Roy*” [3].

The publication of the early veterinary reference books ran parallel with the development of the art of equitation, beginning in Italy, where court life began to flourish and noblemen started to qualify in horseback riding. This is nicely illustrated by an engraving in Antoine de Pluvinsels most famous work, “*L’instruction du Roy en l’exercice de monter à cheval*” published in 1629. During the next two centuries, horses became extremely popular among the upper class, not only as a riding and companion animal but also as an indispensable member of the foxhunt and as a draft animal of the most prestigious carriages. Around this

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