The first epidemic almost certainly occurred between AD 376 and AD 386.

The first available clinical descriptions of the disease were made in 1712 by Bernardino Ramazzini (1633-1714), senior professor of medicine at Padua University. He admitted that there were similarities between rinderpest and smallpox.

However, it was Giovanni Maria Lancisi (1654-1720) who, during the same period, made the first breakthrough in controlling the disease. Johann Kanold (1679-1729) in Prussia recognised the contagious nature of rinderpest, reporting in 1711 that rinderpest was transmissible and that cattle that recovered from the infection became resistant.

Apart from the first sanitary prophylaxis measures defined chiefly by Lancisi, the first medical prophylaxis trials were carried out by a procedure similar to variolation (inoculation). The first attempts to prevent the disease by inoculation (administration of fully virulent products) appear to have been made in Great Britain in 1754 and in the Netherlands in 1755.

Of all the inoculation trials carried out, those of Geert Reinders in the Netherlands deserve special mention. Geert Reinders (1737-1815) was a self-taught farmer. Assisted by Pieter Camper (1722-1789), he performed a number of inoculation trials with varying success. During the course of his experiments, Reinders noticed that calves born of the few mothers who had overcome the infection were themselves resistant to inoculation, which was probably the world’s first observation of maternal immunity (Barrett et al., 2006).

After Edward Jenner’s discovery in 1796 that vaccination with cowpox could prevent smallpox, new inoculation trials were attempted. Further trials were also performed using vaccinia to prevent rinderpest.

Between 1865 and 1867, Great Britain suffered an unprecedented rinderpest epizootic (Collectif, 1866). Taking advantage of this
My presence here today is a tribute to the survival power of a group of viruses, Morbillivirus, which may have evolved and been associated with humans since the time of the first coastal states, 5,000 to 6,000 years ago. For the first time, these civilisations gathered together large populations of susceptible humans and animals, providing an inexhaustible source of susceptible young animals crucial to the persistence of these fragile agents that generally cause short-lived infection conferring full immunity for life. In 1935, the illustrious veterinary historian Leclainche showed that, according to historical documents, the rinderpest epizootic of 376-386 AD was possibly the very first to be recorded formally. It began in the East, as was so often the case thereafter, devastating Belgium, Flanders, Pannonia and Illyria and lastly reaching Roman territory. I would probably not be here today if the rinderpest virus had not demonstrated, once again, its ability to profit from war, civil strife and natural disasters. All such disorder leads to intra- or interstate migrations of cattle, often as plunder or provisions for marching armies. Of course a large number of movements also take place under normal circumstances, particularly in Africa, either in search of pasture (transhumance) or to market for slaughter.

Walter Plowright, free translation of a publication marking his award of the King Baudouin International Development Prize, on 21 November 1984.
because human plague was caused by a bacteria. This made the discovery controversial and Alexandre Yersin (1863-1943), the discoverer of the bacterium responsible for human plague, attempted to check the results by performing experiments in Na-Thrang, Vietnam.

In addition to this seminal discovery, many reputed scientists of the same era added to our knowledge of rinderpest. When a rinderpest epizootic struck South Africa in the late 19th Century, the Germans sent Robert Koch (1843-1910) and Paul Kohlstock (1861-1900) to the country to study the disease and its prevention, while the Pasteur Institute in Paris sent Jules Bordet (1870-1961) and Jan Danysz (1860-1928) to work with the young Swiss veterinarian, Arnold Theiler (1867-1936).

The rinderpest adventure might well have stopped there.

However, in 1920, rinderpest was introduced accidentally into Belgium by a herd of infected zebus from India en route to Brazil. These animals remained in transit in the port of Antwerp for around two weeks in a quarantine facility where they came into contact with American slaughter cattle, before being shipped to markets in Brussels and Ghent. In Ghent, these cattle went on to infect recovered cattle from Germany that were then distributed throughout the country, spreading the disease. Rinderpest erupted in multiple outbreaks but failed to be recognised until three weeks later, in spite of the death of seven of the zebus that had been in transit. Hygienic prophylaxis alone (depopulating the area around the outbreaks) put paid to the epizootic in around five months (August 1920 to January 1921).

The resurgence of rinderpest in Europe, from whence it had been eradicated, highlighted the need for international collaboration to control major infectious diseases of domestic animals and wildlife. Alarmed by the spread of rinderpest in Belgium, France called for an international meeting to be held in 1920 to organize the control of contagious animal diseases worldwide.

This meeting led to the creation in 1924 of the Office International des Epizooties (OIE), now known as the World Organisation for Animal Health.

The first OIE president was Belgian veterinarian Henri De Roo (1861-1930) who had graduated from the veterinary school of Cureghem (Brussels) in 1886. Through his duties in Belgium, he came to play the key role in rinderpest control in 1920, providing dazzling proof of his abilities (Pastoret, 1986).

So, good was born of bad. The rest is another story.

References


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