Early history of canine distemper

Author : Andrew Gardiner

Categories : General, Vets

Date : March 14, 2016

In an oral history recording on the RCVS Knowledge website, vet Alistair Clarke reflected on his “seeing practice” experiences in Helensburgh, near Glasgow. Mr Clarke recalled how his mentor, Bob Chesters, made diagnoses of “hard pad” by hearing dogs clicking their way across a linoleum floor.

Characteristic attitude of a sick dog. Image: *Canine Distemper, Its Complications, Sequelae, and Treatment* by Hamilton Kirk (1922).

It was a common veterinary diagnosis before mass vaccination and many older or retired British practitioners will remember it well. Distemper is sometimes listed with its alternative name, “hard pad disease”, in contemporary textbooks, although hyperkeratinisation of the digital pads is one of a number of associated disorders that might be seen. Others include diverse neurological symptoms, dental complications, eye disease and anosmia (loss of sense of smell; Shores, 2015).

Distemper has an intriguing history and is part of the measles/distemper/rinderpest triad of

morbillivirus diseases. Rinderpest was globally eradicated on 28 June 2011 – only the second infectious disease to have been wiped from the face of the earth (smallpox was first, in 1980).

Many European countries set up their first veterinary schools in response to rinderpest. The disease ravaged Europe in the 19th century, causing economic chaos, with a particularly severe outbreak occurring around 1865. The eventual control of that outbreak contributed substantially in establishing the germ theory of disease, which transformed all human and animal medicine (Worboys, 1991).

Naming and framing

Twenty years previously, British vet William Youatt, acclaimed author of *The Dog* (1845) and editor of journal *The Veterinarian* from 1828, wrote: “It [distemper] is a comparatively new disease. It was imported from France about 100 years since, although some French authors have strangely affirmed that it is of British origin” (Youatt, 1845). It seemed neither country was going to admit they had it first.

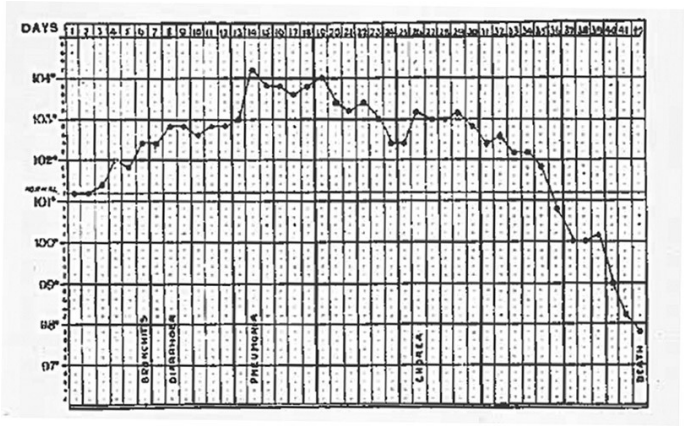
A cap for protecting the ears when treating dogs with distemper. Image: *Canine Distemper, Its Complications, Sequelae*, and Treatment by Hamilton Kirk (1922).

When does a disease start? “In some ways, disease does not exist until we agree that it does – by perceiving, naming, and responding to it” (Rosenberg and Golden, 1989). Agreeing what you are seeing is a new disease entity is not always easy, whether historically or in the present day. Susan Jones’ article on feline urological syndrome gives a nice account of the “framing” of a contemporary veterinary disease (Jones, 1997).

With regard to distemper, a severe canine epizootic was described in Bohemia in 1028 and was considered “true distemper” by Laosson (Ferry, 1911). Another description of a disease that may have been distemper was made in 1580 (Tizard, 1999).

A similar-sounding disease was written about in France in 1740 and again in Germany in 1750, but no sources mention anything similar in Britain until 1760, lending credence to the fact “they had it first”. The early 1760s saw outbreaks in Europe, including one in Madrid in 1763 when 900 dogs reportedly died in one day (Fleming, 1871).

Blancou (2004) cited evidence for another importation theory of distemper, imported not to Britain this time, but to mainland Europe. He suggested the disease possibly accompanied a group of dogs that arrived in Spain from Peru in 1760 just before the large European outbreak.



Regular monitoring of body temperature could be used to try to predict the course of distemper. This case was fatal. Image: *Canine Distemper, Its Complications, Sequelae*, and Treatment by Hamilton Kirk (1922).

A disease similar to distemper had been described in South America as early as 1746. It was distinguished from rabies at the time – rabies being the other major canine scourge and one that could be similar in appearance to the neurological manifestations of distemper.

A particularly severe outbreak of distemper-like disease occurred in South America the year before Spanish dogs crossed the Atlantic in 1759, which Blancou used to support his theory.

Confusingly, sources for both human and animal medicine from the 14th century onwards sometimes use the term “distemper” more generically to mean any disease, so one has to pay close attention to the source and context to ensure it is a specific canine disorder being talked about.

The word’s Latin root is distemperare, which means to mingle or disturb. The term also describes a type of water-based paint mixed with glue that was used for murals and it may be one of the secondary symptoms of distemper (skin flaking) resembled the flaky appearance of older wall murals.

Table 1. Terms used to denote distemper in English and European sources	
English	Hard pad disease, dog disease, dog influenza, dog plague, dog typhus, canine smallpox, malignant catarrhal fever
French	La maladie des chiens, la maladie du jeune age
German	Hundestaupe, hundekrankheit
Spanish	Reuma
Italian	Cimurro
Lowland Scots	Snifters

Table 1. Terms used to denote distemper in English and European sources.

However, unfortunate dogs were often described by writers as being “spectral” because of their whitish appearance when there was extensive dermatosis, so this feature could provide a clue as to why the name was chosen. Many more names for distemper exist (**Table 1**), but perhaps the most descriptive term was used by Lowland Scots or Lallans: snifters.

The reference to smallpox as a name for distemper is a recurring feature in the disease’s history and due to skin eruptions sometimes found at the early stage, typically on the hairless and thin-skinned areas of the canine abdomen and inner thighs. The significance of these eruptions, and whether they constituted the primary lesion of distemper, was debated extensively.

The term “dog influenza” also had a later significance: the 20th century research that led to an effective vaccine for distemper was carried out in association with research into human influenza between 1922 and 1933 in a Medical Research Council programme largely funded by subscribers to *The Field* magazine (Bresalier and Worboys, 2014).

Youatt later became the business partner of the “father of canine pathology”, Delabere Blaine.

Blaine was a human surgeon who crossed and re-crossed species boundaries in a colourful and varied career. Blaine wrote when he decided to concentrate on “brute medicine”, especially dogs, his character was called into question. However, he said it was the character and superior qualities of dogs – their sagacity – that elevated them above other animals and made them worthy subjects.

Table 2. Distemper cases by month at Youatt's Nassau Street, London clinic in 1834

Month	No of cases
January	None given
February	8
March	24
April	25
May	38
June	21
July	7
August	26
September	28
October	33
November	"Very few"
December	"Very few"

Table 2. Distemper cases by month at Youatt's Nassau Street, London clinic in 1834.

Blaine and Youatt lived in interesting times, when competing theories of spreading disease – spontaneous generation and contagionism – had their adherents. Youatt's annual report from his own clinic (**Table 2**) shows how common distemper was at this time.

When describing distemper at the Earl of Berkley's kennels, Edward Jenner said: "I have endeavoured to destroy the contagion, by ordering every part of a kennel to be carefully washed with water, then white-washed, and finally to be repeatedly fumigated with the vapour of marine acid; but without any good result" (Jenner, 1815).

Bad atmospheres

Physicians (of animals and humans) were often interested in the effects of climate and atmosphere on disease. Spontaneous generation theories proposed diseases "generated" during specific conditions or in places where certain atmospheric conditions existed, such as marshes.

Youatt noted distemper's predilection for the mild and wet spring and autumn months in London, and believed (as did Jenner and Blaine) the disease could generate as well as spread via contagion from already sick dogs (Youatt, 1830).

A British vet working in India reported on how distemper was influenced by "the secret and malignant effects of the Bengali climate", especially for imported well-bred English dogs (JG, 1837). Interestingly, similar arguments were made to support the disease susceptibilities of well-bred, northern European people in the tropical and subtropical colonies.

According to Youatt, the canine mortality rate for distemper – which was agreed by others, including Jenner – was about one in three cases.

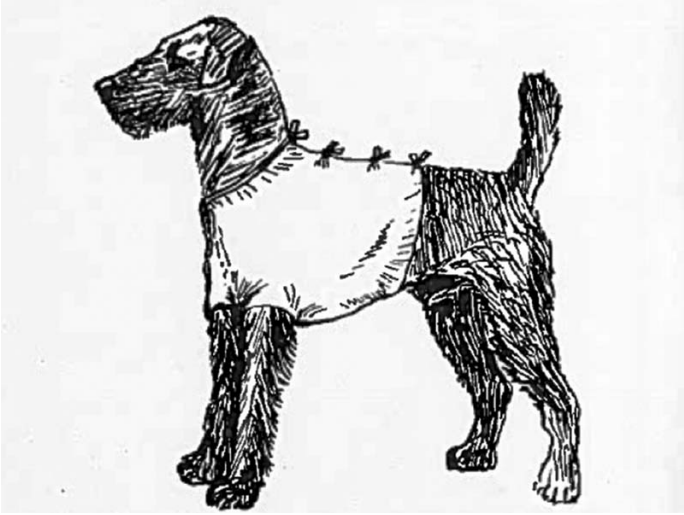
But distemper was, above all, a protean malady. In some dogs, it could be so mild as to be almost symptomless; alternatively, it could run a rapid and fatal course, again with few outward symptoms. It could also take a more protracted appearance, with various symptoms showing up as different body systems, in turn, affected or there could be apparent full recoveries followed by sudden relapses.

Nervous complications frequently intervened, resulting in many distempered dogs being killed as "mad" or rabid, due to the paranoia about that disease (Pemberton and Worboys, 2007).

Finally, other diseases could superimpose on distemper or be mistaken for it. It is no wonder distemper caused so many problems for diagnosticians.

Curing distemper

Blaine wrote there was "no specific" cure for distemper, but, nevertheless, advocated his own "celebrated remedy for the distemper in dogs, which has been so long and so deservedly appreciated". This advert appeared in his major work, *Canine Pathology* (Blaine, 1817).



A chest coat for dogs afflicted with pneumonia. Image: *Canine Distemper, Its Complications, Sequelae*, and Treatment by Hamilton Kirk (1922).

In a biographical sketch in the book, Blaine described his returning to canine practice to achieve “fame and emolument” after one of his characteristic career diversions. He had inherited and then spent a fortune and also joined the Army, where he was an equine and human surgeon.

Dunlop and Williams (1996), in assessing Blaine’s career and influence, said: “His weak point was his mercenary nature; in the brazen manner of a patent medicine salesman he advertised some remedies as efficacious that he must have known, in the main, to be worthless.”

In Blaine’s defence, *Canine Pathology* does at least cite a recipe for a distemper tonic anyone could make and use, which Blaine himself states will “prove nearly as useful in its application, and not less salutary in its effect, than even the specific alluded to”.

There is still the problem with the allusion to specifics in the first place, but it is not quite the mercenary hard sell it may have been. He also admits, even with his famous powder, there may not always be the “striking amendment” one would wish for and supplementary treatment would also be needed. That is good clinical advice because it is well known distemper treatment probably relies on good nursing above all else. Several prominent canine vets of this period and beyond ran distemper nursing homes where dogs could be rehabilitated.

With a disease as slippery as distemper, what counted as reliable evidence was always open to debate. The fact anyone could call themselves a veterinary surgeon did not help matters, until the Veterinary Surgeons Act 1881 and, even following that, so-called “unqualified practice” remained a perpetual problem with a difficult to enforce law. Taken in this context, distemper’s history offers a fascinating insight into both an emerging disease and profession.

References

- Clarke A (2011). Extract from Capturing lives in practice interview, http://knowledge.rcvs.org.uk/grants/awards-made/collaborations/capturing-life-in-practice/alistair-clarke
- Blaine D (1817). *Canine Pathology*, T Boosey, London.
- Blancou J (2004). Dog distemper: imported into Europe from South America? *Historia Medicincae Veterinariae* **29**(2): 35-41.
- Bresalier M and Worboys M (2014). Saving the lives of our dogs: the development of canine distemper vaccine in interwar Britain, *British Journal for the History of Science* **47**(173): 305-334.
- Dunlop RH and Williams DJ (1996). *Veterinary Medicine: An Illustrated History*, Mosby, St Louis: 597.
- Ferry FS (1911). Etiology of canine distemper, *The Journal of Infectious Diseases* **8**(4): 399-420.
- Fleming G (1871). *Animal Plagues: their History, Nature and Prevention*, Chapman and Hall, London.
- Jenner E (1815). Observations on distemper in dogs, *Medical and Chirurgical Society Transactions* **1**: 263-268.
- JG (1837). On the canine distemper of Bengal, *The Veterinarian* **X**(14): 278-280.
- Jones SD (1997). Framing animal disease: housecats with feline urological syndrome, their owners and their doctors, *Journal of the History of Medicine* **52**(2): 202-235.
- Pemberton N and Worboys M (2007). Mad Dogs and Englishmen. *Rabies in Britain 1830-2000*, Palgrave Macmillan, Basingstoke.
- Rosenberg G and Golden J (1989). Framing disease: the creation and negotiation of explanatory schemes, *The Millbank Quarterly* **67**(Supplement 1): 1-15.
- Shores A (2015). Canine distemper. In Côté E (ed) *Clinical Veterinary Advisor: Dogs and Cats* (3rd edn), Elsevier, Missouri: 287-289.
- Tizard I (1999). Grease, anthraxgate, and kennel cough: a revisionist history of veterinary vaccines, *Advances in Veterinary Medicine* **41**: 7-24.
- Worboys M (1991). Germ theories of disease and British veterinary medicine, 1860-1890, *Medical History* **35**(3): 308-327.
- Youatt W (1830). On the distemper of dogs, *The Veterinarian* **III**(26): 75-88.
- Youatt W (1854). *The Dog*, Lea and Blanchard, Philadelphia.