CAUSES AND CURES OF RABIES

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PIPPA ELLIOTT BVMS, MRCVS in the final part of her article, looks at historical beliefs about the causes of rabies and how to cure it

QUESTION: What links the following: idleness, gluttony and sexual frustration?

ANSWER: In the past, they were all claimed to cause rabies.

In the 19th century, dog ownership tended to fall into two groups – pets living in luxury and those belonging to the poor. Fingers were pointed at the lifestyle of both groups for causing rabies. It was postulated lapdogs suffered from too much idleness and an excess of food, which "exhausted their nervous system," predisposing them to rabies.

"Hydrophobia makes its appearance… in dogs that exist in a state of confinement, which are kept in towns and take little exercise."

Sporting and Fancy Gazette

However, greater responsibility for the scourge of rabies fell on those dogs belonging to the poor. Letters to *The Times* reflect a prevailing attitude in the early 1800s.

"If these no-breed curs [crossbred dogs] were destroyed, there would be little fear of hydrophobia."

The Times

To discourage dog ownership among the lower classes the British Government levied a dog tax. Somewhat bizarrely, this tax was only charged once the dog reached six months of age. This led to families acquiring cute puppies, and once the dog reached taxable age it was turned out on to the streets – worsening the problem.

Another theory about the cause of rabies in dogs was sexual frustration. In pre-neutering days it was said genteel pet keeping led to a frustration that caused canine madness.

In 1830, Henry William Dewhurst addressed the London Veterinary Medical Society on just this subject, saying a male dog, unable to express its natural behaviour, developed a dangerous frustration that weakened its nervous system and led to rage. The idea gained purchase in Victorian England and spread across France and Italy.

In 1845, a Monsignor Storti wrote *Project for the Prevention of Hydrophobia in Man*, which suggested creating establishments where male dogs could be taken to express their natural urges. However, not everyone was convinced and, in the 1840s, Henry Dewhurst's medical pretensions were also ended when his contemporaries unveiled him as a charlatan.

Another theory about the cause of rabies was the dogs' inability to sweat, leading to overheated blood that turned toxic. Others proposed dogs caught rabies from exposure to bad breath, or from eating their own faeces. In truth, no one really had a clue.

Well, so much for the cause, but what of a cure? These were many, varied, and outlandish, and all remarkably useless. Of course, we can say this with the benefit of 21st century knowledge of virology and immunity. Centuries ago, with no science to guide them, people did the best they could working from observation alone.

A hair of the dog

Our first cure has found its way into common parlance. The expression "a hair of the dog that bit you" may be familiar as a hangover cure. But were you aware these words were first penned by Pliny the Elder around AD23 to 27, and referred to a rabies cure?

But don't feel bad. It seems Samuel Pepys was also misinformed as he tried "the hair of the dog" to cure a hangover; as recorded in his diary.

"My head aching all day from last night's debauch. To the office… have me drink two drafts of sack [Spanish dry white wine] to cure me of last night's disease, which I thought strange, but I think find it true."

Samuel Pepys, April 3, 1661

Perhaps Pepys would be disappointed to learn Pliny's actual instructions were:

"Insert in the wound [the dog bite] the ashes of hairs from the tail of the dog that inflicted the bite."

Mind you, Pliny then suggested other options such as burning the dog's head to ashes and using that as a salve, or even eating the dog's head. Pliny also recommended mixing hairs from the mad dog's tail with livers taken from drowned puppies of the same sex as the rabid beast, and you guessed it, applying this to the wound. Or even a maggot taken from the rabid dog's carcase. So perhaps he was guessing too.

Early cures seemed to rely on putting objects on to the bite wound, as here:

"Another proven remedy after being bitten by a rabid dog is to find a cockerel… pluck its backside… and apply the anus of the bird [to the bite wound], which will suck out the poison."

Water torture

Given one of the symptoms of rabies is profound hydrophobia, many cures seized on water as key to a cure. Perhaps working on the homeopathic principle that a little of what causes the ailment cures you, many poor sufferers were forced into or near water.

Indeed, a Sumatran cure was for a priest to bless a beaker of water and then force the rabies victim to drink it. In 14th century Europe, setting sail might help (or not).

"In order to be cured, some go to the sea, which is a good remedy."

Sumatran cure

In 1413, Edward of Norwich, the Duke of York, was more sceptical, and commented how the traditional remedy of going to sea and having nine waves roll over the patient was of "little help."

We've met the duke in an earlier article (he died at the Battle of Agincourt 1414) and his authoritative book *The Master of Game*. In the chapter on "Sickness of hounds and their corruption" his suggestion was to cauterise the wound and apply a concoction of nettles, leeks, garlic, vinegar, salt and olive oil.

Despite the duke's opinion, water therapy prevailed into the 16th and 17th centuries with victims, both human and canine, being sent to sea. This included Marie-Elizabeth de Ludres, who was the mistress of King Louis XIV.

However, Marie-Elizabeth lived until the ripe old age of 79, so perhaps there was something in this

cure after all.

Cookbook cures

In the mid-18th century, Hannah Glasse was an influential cook and the Georgian equivalent of Nigella Lawson. In a sort of glorified “you are what you eat”, Hannah had considerable authority when it came to recommending rabies cures. She published several suggestions in her innovative book *The Art of Cookery* of 1747. Amid instructions for making cheesecakes and jarring cherries there is also “A certain cure for the bite of a mad dog”.

The ingredients include cleaned, dried and powdered liverwort and two drams of black pepper, mixed together well, and taken in half a pint of warm cow’s milk every morning for four doses.

She even addressed the problem of infected livestock and suggests these dosages for animals.

“Ten or 12 spoonfuls for a horse or a bullock, three, four or five to a sheep, hog or dog. This must be given within nine days after the bite; it seldom fails man or beast.”

Part of Hannah’s cure for humans involved being bled and then immersed in pools of cold water. She doesn’t mention whether this is also necessary for the animals.

The final word should go to the heroic efforts of Louis Pasteur, as he worked to develop a rabies vaccine. His research included extracting saliva from dogs in the grips of rabid rage. To do this two assistants held the dog while he pressed a test tube to the slavering beast’s jaws.

Pasteur and his colleagues were only too well aware of the awful consequences of catching rabies. It is humbling to learn they kept a loaded pistol within reach. This wasn’t to shoot the dog. Pasteur had a mutual pact with his co-workers that if one of them got bitten, his colleague would shoot him dead to save him from the awful death of rabies.

Close-up of a dog’s face during late-stage “dumb” paralytic rabies.

IMAGE: CDC/Barbara Andrews/ Centers for Disease Control and Prevention’s Public Health Image Library.