

## Lyssa: Goddess, Drug, Illness and Shield in Hellenic Antiquity

Gregory Tsoucalas

History of Medicine and Medical Deontology, School of Medicine, University of Crete, Heraklion, Greece

**Correspondence:** *gregorytsoucalas@uoc.gr*; Tel.: + 30 694 5298205

**Received:** 10 April 2024; **Accepted:** 16 May 2024

### Abstract

The aim of this historical review is to present the beliefs of the ancient Greeks related to lyssa and how the mythology surrounding this disease was created. In Greek antiquity Lyssa was a secondary goddess, a personification of a zoonotic disease which could be transmitted after an animal bite. Also named hydrophobia, the illness lyssa presented with an acute loss of mental stability, offensive frenzy and madness, and fear of water in the patient, who was seen to be possessed by a daemon as a divine punishment. In the Trojan War, lyssa was seen as a drug to Greek warriors, to demonstrate unreal power during battle. Homer was the first to refer to the hound of Orion, who was the greatest ancient Greek hunter. The hound, named Sirius, as a carrier of lyssa, was used as a bio-weapon to inflict death among the Trojans. Soranus of Ephesus and Galen gave descriptions of the disease, and proposed a sponge soaked with various herbal drugs as a therapeutic measure. The Greco-Roman physician Caelius Aurelianus noted that ancient Greeks knew about lyssa, and was the first to suggest that this was a neuro-disease. Lyssa was a figure in Greek Tragedy, depicted as a young female with a dog-like crown, related to Erinyes and Maniae. **Conclusion.** Lyssa was noted as a disease in Hellenic literature more than 2500 years ago. It was used as a bio-weapon to inflict madness. This vignette reveals Lyssa within a historical framework for the reader to understand the disease's origins.

**Key Words:** Lytta ■ Rabies ■ Zoonotic ■ Iliad ■ Ancient Greece.

### Introduction

Lyssa, a bullet-shaped neurotropic virus with a strong affinity for nerve tissue, was considered to be a daemon which possesses the brain. It is a virus which causes hydrophobia, aerophobia, malaise, anxiety, paralysis, and focal or generalized seizures, followed eventually by coma and finally death. This “bullet” of nature, known since prehistoric times, became a weapon in the era of the Trojan War, and was seen as a goddess whose fatality should be celebrated, and a disease well described by Greek scholars through the ages (1). Many believe that lyssa was unknown to Homer (2). However, a closer look at the war described in *The Iliad* demonstrates the opposite (3). In ancient Greece Lyssa (Greek λύσσα), also known as Lytta in Attic Greek, meant fury, rage, furious rush, insanity, madness, and mania (4). The modern term “rabies” derives

from the Latin “rabere”, meaning infection of madness, a patient talking like a raven (5).

Regarding other possible etymological origins of the word lyssa, it may derive from the ancient Greek verb “λύω” (lyo), which among other things means “to leave”, “to unleash”, while the noun “λύσις” (lysis) means loss and dissolution, rendering the disease a neuro malady, as it leads to an acute loss of rational abilities, unleashing a mental frenzy (6). Lyssa seems to have been highlighted in many works of ancient Greek literature. Epic poems, tragedies and medical treatises celebrate this mental peculiarity. In relation to this concept, it can be argued that, depending on the era, the social ethics and the authors who dealt with it, lyssa was understood and described in various ways.

This historical review aims to accentuate the climax of the use of the term Lyssa/lyssa, ranging

from a disease to a weapon, and finally to a chthonic goddess in Hellenic antiquity.

### The Goddess

In Greek mythology, Lyssa was a goddess, the daughter of Nyx (Greek: νύξ, the night, darkness), born from Uranus' blood, which dripped soon after his castration by Cronus (4, 7-9). Lyssa was a kindred form of the Erinyes and Maniae, causing mad rage in any person or animal her ailing hounds hunted (7, 9). An inhabitant of Erebus, the underground world of chaos, the personified spirit of crazed frenzy in both humans and dogs, a daemon, she was a major figure in Athenian tragedy. Aeschylus presented her as an agent of Dionysus, sent to drive the Minyades mad, while Euripides, in his "Heracles Furens", narrates the incident when the goddess Hera sent her to inflict Heracles with madness (7).

On an Athenian Krater (vase), she is implicated in the myth of Actaeon, depicted standing beside him, as he is torn apart by his maddened hounds. In this scene, she appears as a young female, dressed in a short skirt and crowned with a dog's head, signifying her dominion over the hounds (Figure 1) (10). If someone dared to offend Lyssa, she would possess him, resulting in a loss of mind, logic and behavior control. This concept provides further insights about how such behavior was viewed within



Figure 1. Lyssa (Λύσσα, second figure from the left) and her hounds, a detail from an Athenian red-figure krater vase c. 5<sup>th</sup> century BC, Museum of Fine Arts, Boston.

the ancient Greek culture - as a disease inflicted by gods who possess you (11). Lyssa acted in order to provoke a crime, whereas the action of the Erinyes followed the crime, and she was able to produce terrible deeds, or make the possessed act in a certain way (12).

### The Disease

In the epic poem "The Iliad", Homer uses the word "lyssa" in a series of fragments, mainly to convey the unrestrained rage of war, the furious drive of the warriors towards killing or possible death. The term used is "μαίνομαι" (mainomai, being possessed by mania), meaning to be driven to frenzy and madness by the goddess Lyssa. Ajax, the great warrior, was possessed in order not to cause greater harm to the Trojans, and was driven to attack sheep. In another part of The Iliad, when Achilles learns that Hector has killed his friend Patroclus, he returns to the battlefield fighting "like a rabid dog" (ο Αχιλλέας με λύσσα εντρόπιαζε τον Έχτορα. Rhapsody Ω, verses 22-24) (3).

Medico-philosophers of the era categorized the disease as a zoonosis found in wolves, bears, leopards, horses, donkeys, bats and dogs. Humans could be infected after being bitten by an infected animal. The first description is found in the works of the Greek physician Rufus of Ephesus (late 1st and early 2nd centuries AD), who emphasized mental disturbance, paranoia and fear of water, proposing a sponge should be placed on the wound as treatment, soaked with "absinthe and aristolochia and wolfberry, and a decoction of river crabs, garlic, parsley, and gentian root" (13). Hydrophobia was used as a term by the Atomic philosopher Democritus (c.460-370 BC) for a fever causing dehydration. The patient was tormented by an intolerable thirst, which resulted in the most obvious symptom, which was the fear of water, also observed in sick animals. Hippocrates (c. 460-377 BC), who without actually naming the disease, claimed that patients "in a frenzy drink very little, are disturbed and frightened, tremble at the least noise, seized with convulsions" (14). This concept was also suggested by the Greek physician

Galen of Pergamon (129-216 AD), naming the disease hydrophobic (Greek: νόσημα ὑδροφόβον) (15). They tried to throw the possessed into deep water, including children who could not swim, so that they would drown (16). All these named the disease “hydrophobia”, as an alternative name to lyssa.

### The Hoplon

A Hoplite was a citizen soldier of the ancient Greek states, carrying weaponry to defend his position (4). One of these weapons, a hoplon (ὅπλον), was used in the Trojan War, but it was different in nature. Greek warriors who campaigned against Troy used lyssa as a drug, acting as a shield to enable them to achieve impossible results during battle, while they also used dogs as carriers of the disease to inflict death through their saliva. Homer described Sirius (Greek: Σείριος, meaning flaming), Orion’s hound, which was sent to attack the Trojans, possessed by Lyssa, to cause traumatic death (3). This use of a bio-weapon in a battle during the siege of Troy was among the first references to a different kind of warfare.

### Discussion

Among all the features of mankind’s experience, illness has been one of the most constant. The earliest etiological explanation of diseases in ancient Greece was that they were divine in origin, a symptom of a god’s displeasure, a punishment for moral misdeeds. The remedy was sought in prayer, purification, votive offerings and sacrifices, to seek the favor of the gods. This attitude towards disease, referring to the supernatural for relief, reflected the paucity of therapeutic measures available in antiquity against diseases of often epidemic proportions. Thus, the goddess Lyssa was the bringer of a neuro-brain disease with chthonic characteristics, related to mental darkness, and fatality, with inevitable death in agony. Her hounds alleviated the nature of the punishment, whilst revealing some understanding of the disease itself (17). The

goddess of hunting, Artemis, was thought to be the healer of rabies (18).

The Greco-Roman physician Caelius Aurelianus (c. mid. 5<sup>th</sup> century AD) testified that ancient Greek physicians knew about the disease. Meanwhile, in his effort to present the most vivid description, he noted that patients “have difficulty performing usual movements, experience light, turbulent, and intermittent sleep, yawning constantly, which is probably an indication of both physical and mental weakness. They become annoyed by the weather, complaining about a dirty southerly wind, despite clear and calm weather, and they can barely tolerate rain”. He was among the first to categorize lyssa clearly as a brain disease, and opposed Eudemus (c. 4<sup>th</sup> century AD) who compared lyssa to melancholy, due to the similarity in the manifestation of fear, by highlighting the acute nature of lyssa and the chronic nature of melancholy, thereby setting apart these two different forms of mental illness (19).

The earliest reference to death from a dog-bite may be found in the laws of Eshnunna from Mesopotamia, dated c. 2200 BC, while in Old Babylonian texts, fragments exist about a dog disease which could render humans mad, or cause them to become frenzied. Even though rabies cannot justifiably be incriminated as the cause of death, these references give strong evidence that enzootic diseases were known many millennia ago. This could suggest that in Homer’s era, lyssa was a notorious malady, a disorder of the structure or function of the brain, in a person who seemed to be possessed by a daemon (20).

Dogs in ancient Greece enjoyed an important place, alongside goddesses such as Hecate, while most famous warriors, such as Alexander the Great, were accompanied by hunting and fighting dogs (Figure 2). Alexander’s mother Olympia was credited with introducing Molossians from her native Illyria. Meanwhile, Xenophon wrote a treatise entitled “*Kynegetikos*” (The Hunting Dogs), referring to dogs and their use in hunting and war. Thus, Homer, when mentioning Sirius, was referring to a usual habit in ancient Greek culture (21).



Figure 2. Departure of a Warrior. In the center a young warrior stands, facing to his left a bearded archer in a Phrygian costume, who is looking downward, as if in grief. At his feet lies a large hound of mastiff breed, looking up at him. Attic red figured amphora, c. 510-500 BC, British Museum.

## Conclusion

From the archaic period of ancient Greece and throughout the Bronze Age and the Classical Period, lyssa was considered a disease, as well as a secondary goddess, and was used as part of the Greek war arsenal. Homer mentioned the condition known as lyssa (rabies) in hounds, and from that time philosophers and physicians went on to determine its nature. Lyssa epizootics existed in the Greek world, and had direct and indirect consequences for the local human population, also molding ancient Hellenic mythology.

### What Is Already Known on This Topic:

*Lyssa is a viral disease, transmitted through the saliva of an infected animal soon after a bite. The disease was known in ancient Greece.*

### What This Study Adds:

*This historical review collects references by various ancient Greek philosophers and physicians, in order to present the disease as it was understood in that era. The paper emphasizes a different approach for the reader to comprehend the origins of a disease which is still endemic worldwide.*

**Conflict of Interest:** The author declares that he has no conflict of interest.

## References

1. Maurya I, Vagholkar K, Patel B, Siddiqui M, Tiwari S, Maurya P. State of globe: rabies: the lethality since antiquity! *J Glob Infect Dis.* 2015;7(1):1-2. doi: 10.4103/0974-777X.150880.
2. Allbutt CT. Greek medicine in Rome. The Fitzpatrick lectures on the history of medicine delivered at the Royal college of physicians of London in 1909-1910, with other historical essays. London: Macmillan; 1921.
3. Homer. *Iliad* (Kazantzakis N & Kakrides ITh. Trans). Athens: Estia; 1985.
4. Liddel H, Scott R. *The Great Lexicon of the Greek Language.* Athens: Konstantinides; 1904.
5. Stratmann FH. *A Dictionary of the Old English Language Compiled from Writings of the XII. XIII. XIV. and XV. London: Centuries. Trubner & Co; 1867.*
6. Schrevelius C. *Cornelii Schrevelii Lexicon manuale Graeco-Latinum.* Mosquae: Typis Sanctifsimae Synodi; 1810.
7. Decharme P. *Mythologie de la Grèce antique [Ancient Greek Mythology].* Paris: Garnier Frères; 1879.
8. Euripides. *Heracles Furens [Heracles Furious].* Athens: Nefeli; 2011.
9. Ovidius. *Metamorphoses* (George Sewell Trans.). London: A. Bettesworth and W. Taylor in Pater-Noster-Row, E. Curl in Fleet-Street, and J. Browne without Temple-Bar; 1717.
10. Matheson SB. *Polygnotos and vase painting in classical Athens.* Wisconsin: The University of Wisconsin Press; 1995.
11. Plante TG. *Abnormal Psychology Across the Ages.* London: Bloomsbury Publishing; 2013.
12. Karakantza ED, Christopoulos M, Levaniou O. *Light and Darkness in Ancient Greek Myth and Religion.* Plymouth: Lexington Books; 2010.
13. Aetius Med. *Iatricorum liber VIII. Venetiis: Aldo Manuzio eredi & Andrea Torresano eredi; 1534.*
14. Etymologia: Rabies. *Emerg Infect Dis.* 2012;18(7):1169. doi: 10.3201/eid1807.ET1807.
15. Galenus Med. *De theriaca ad Pisonem.* Antwerp: Joannes Bellerus; 1587.
16. Anonymi Medici. *De Morbis Acutis et Chroniis* (Brian Fuchs trans.). Leiden: Brill; 1997.
17. Wilson N. *Encyclopedia of Ancient Greece.* New York & London: Routledge; 2013.
18. Schneider MC, Santos-Burgoa C. *Tratamiento contra la rabia humana: un poco de su historia [Treatment of human rabies: a summary of its history].* *Rev Saude Publica.* 1994;28(6):454-63.
19. Caelius Aurelianus *On Acute Diseases and on Chronic Diseases* (Drapkin IE trans.). Chicago: The University of Chicago Press; 1950.
20. Adamson PB. *The spread of rabies into Europe and the probable origin of this disease in antiquity.* *J R Asiat Soc GB Irel.* 1977;2:140-4.
21. Branigan CA. *The Reign of the Greyhound.* Hoboken: Turner Publishing Company; 2004.