Socrates and Temporal Lobe Epilepsy: A Pathographic Diagnosis 2,400 Years Later

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Summary: Purpose: Some enigmatic remarks and behaviors of Socrates have been a subject of debate among scholars. We investigated the possibility of underlying epilepsy in Socrates by analyzing pathographic evidence in ancient literature from the viewpoint of the current understanding of seizure semiology.

Methods: We performed a case study from a literature survey.

Results: In 399 BCE, Socrates was tried and executed in Athens on the charge of “impiety.” His charges included the “introduction of new deities” and “not believing in the gods of the state,” because he publicly claimed that he was periodically and personally receiving a “divine sign,” or daimonion, that directed him in various actions. We found textual evidence that his daimonion was probably a simple partial seizure (SPS) of temporal lobe origin. It was a brief voice that usually prohibited Socrates from initiating certain actions. It started when he was a child, and it visited Socrates unpredictably. Moreover, we found at least two descriptions of Socrates’ unique behavior that are consistent with complex partial seizures (CPSs). The fact that Socrates had been experiencing both SPSs and CPSs periodically since childhood makes the diagnosis of temporal lobe epilepsy (TLE) likely.

Conclusions: We hypothesize that Socrates had a mild case of TLE without secondary generalization. This is the first report in 2,400 years to present a pathographic diagnosis of TLE in Socrates based on specific diagnostic features in the ancient textual evidence. Our study demonstrates that the knowledge of modern epileptology could help understand certain behaviors of historic figures.

Key Words: Temporal lobe epilepsy—Partial seizure—Socrates—Philosophy—Religion.

Socrates has been listed occasionally as one of many “famous epileptics”(1,2), but no evidence has been presented from the ancient sources to substantiate the claim. We analyzed pathographic evidence in ancient literature in light of the current understanding of seizure semiology.

METHODS

Socrates left no written documents. Some of his younger contemporaries, including Plato and Xenophon, are the main sources of information about the historic Socrates. We surveyed the dialogues of Plato and Xenophon’s four socratic writings for descriptions of Socrates’ behaviors and remarks that may suggest his unique neurologic and psychiatric condition. We analyzed those descriptions in English translations (3) and in the original Greek texts, paying close attention to meaning and usage. The numbers and letters attached to the following quotes from Plato represent Stephanus numbers, which are commonly used among classical scholars.

Case history

Since childhood, Socrates experienced recurrent visits of voices that he variously called “divine sign,” “spiritual sign,” “my prophetic power,” or, in Greek, the “daimonion.” He describes this experience:

This began when I was a child. It is a voice, and whenever it speaks it turns me away from something I am about to do . . . (Apology 31d)

Whereas the “daimonion” addressed Socrates unexpectedly about trivial matters, it did not give him advice when he was facing serious decisions and might have expected some assistance. Socrates gives his reasons, based on the failure of his divine sign to appear, for now concluding that death is not an evil:

At all previous times, my familiar prophetic power, my spiritual manifestation, frequently opposed me, even in small matters, when I was about to do something wrong, but now that, as you can see for yourselves, I was faced with what one might think, and what is generally thought to be, the worst of evils, my divine sign has not opposed me, either when I left
home at dawn, or when I came into court, or at any time
that I was about to say something during my speech. Yet in other
talks it often held me back in the middle of my speaking, but
now it has opposed no word or deed of mine. (Apology 40a-b)

Elsewhere, he describes an example of a trivial appearance
of the voice and how it affected his actions.

I was sitting by myself in the undressing room just where you
saw me and was already thinking of leaving. But when I got
up, my customary divine sign put in an appearance. So I sat
down again, and in a moment the two of them, Euthydemus
and Dionysodorus, came in . . . (Euthydemus 272e-273a)

In the Phaedrus, after Socrates delivers his first speech
on love, he promises Phaedrus that he will not give any
more speeches on the topic. Socrates is about to cross
the river near where they are speaking and take his leave,
when, all of a sudden, he receives the daimonion.

My friend, just as I was about to cross the river, the familiar
divine sign came to me which, whenever it occurs, holds me
back from something I am about to do. I thought I heard
a voice coming from this very spot, forbidding me to leave
until I made atonement for some offense against the gods.
(Phaedrus 242b-c)

Socrates then renounces the first speech entirely as
an “offense” and “false story.” This leads to the second
speech, which is the antithesis of the first speech. However,
Socrates seems to become confused and amnesic about
this sudden conversion. After the two speeches, Socrates
instructs Phaedrus about rhetoric, discussing two classes
of words, more concrete words such as “iron” or “silver,”
whose meanings people agree about, and more ab-
tract words such as “just” or “good,” about which people
differ.

Socrates: Well, now, what shall we say about love? Does
it belong to the class where people differ or to that where they
don’t? PHAEDRUS: Oh, surely the class where they differ.
Otherwise, do you think you could have spoken of it as you
did a few minutes ago, first saying that it is harmful both to
lover and beloved and then immediately afterward that it is
the greatest good? Socrates: Very well put. But now tell
me this – I can’t remember at all because I was completely
possessed by the gods. Did I define love at the beginning of
my speech? Phaedrus: Oh, absolutely, by Zeus, you most
certainly did. (Phaedrus 263c-d)

Although those episodic voices are mostly subjective
experiences, objective descriptions of unusual behaviors
are also reported by his friends. In the beginning of Plato’s
Symposium, Socrates is walking to Agathon’s house for a
dinner party (symposium). On his way, Socrates meets
one of his close friends, Aristodemus, and urges him to
join the party even though he was not invited. As they
walk to Agathon’s house, Socrates lags behind, as if lost
in thought. When Aristodemus arrives at Agathon’s home,
Agathon greets him at the door and asks where Socrates
is. Aristodemus looks around, and Socrates has vanished.
Agathon sends a slave to search for Socrates, who returns
and gives the following report:

“Socrates is here, but he’s gone off to the neighbor’s porch.
He’s standing there and won’t come in even though I called
him several times.” “How strange,” Agathon replied.” “Go
back and bring him in. Don’t leave him there.” But Aristode-
mus stopped him. “No, no,” he said. “Leave him alone. It’s
one of his habits: every now and then he just goes off like
that and stands motionless, where he happens to be. I’m sure
he’ll come in very soon, so don’t disturb him; let him be.”
(Symposium 175a-b)

Agathon then ordered the slaves to start the dinner.

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**TABLE 1. Semiology of Socrates’ temporal lobe epilepsy**

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<td>Republic 6 496c</td>
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<td>* Provocation by initiating action and speech</td>
<td>Phaedrus 242b-c, Euthydemus 272e-273a</td>
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So, they went ahead and started eating, but there was still no sign of Socrates. Agathon wanted to send for him many times, but Aristodemus wouldn’t let him. And, in fact, Socrates came in shortly afterward, as he always did – they were hardly halfway through their meal. (Symposium 175c)

One more description of a similar prolonged unresponsiveness is found in the Symposium. Alcibiades, one of Socrates’ friends and admirers, talks about his experience with Socrates when they were on military campaign together years before.

One day, at dawn, he[Socrates] started thinking about some problem or other; he just stood outside, trying to figure it out. He couldn’t resolve it, but he wouldn’t give up. He simply stood there, glued to the same spot. By midday, many soldiers had seen him, and, quite mystified, they told everyone that Socrates had been standing there all day, thinking about something. He was still there when evening came, and after dinner some Ionians moved their bedding outside, where it was cooler and more comfortable[.. .], but mainly in order to watch if Socrates was going to stay out there all night. And so he did; he stood on the very same spot until dawn! (Symposium 220c-d)

**DISCUSSION**

Since childhood and throughout his adult life, Socrates experienced brief, recurrent, and stereotyped voices that were often triggered by certain actions such as speaking, standing up, and walking. Voices came irrespective of Socrates’ expectation and the importance of the matter at hand. In Phaedrus, the visit of the voice was followed by a confused and amnestic period in which Socrates was unable to recall the speech he just delivered. We hypothesize that the voice is probably a simple partial seizure (SPS) of temporal lobe origin, possibly in the left lateral temporal lobe. The accompanying amnestic period might be a brief complex partial seizure (CPS) after an SPS. We could not find Socrates describing any specific words spoken by the voice. This suggests that the content of his SPS was rather vague. We speculate that the main reason Socrates may have interpreted the voice as directing him to change his course of action was that the episode was often associated with the initiation of certain actions, or possibly precipitated by exercise, movement, or speaking, rather than that the voice itself had any specific content.

He also had episodes of prolonged unresponsiveness such as the one he experienced after he walked briskly to the party in the Symposium. His friend testified that this was just “one of his habits,” indicating this was also a recurrent symptom. The Symposium also states that a similar episode happened years before in the military camp. We hypothesize that these episodes were probably CPSs, and the prolonged episode could have been a complex partial status.

The presence of both SPSs and CPSs in Socrates suggests he probably had temporal lobe epilepsy (TLE). The table summarizes our findings and interpretation. We could not find any indication that Socrates had a secondarily generalized seizure, nor could we find evidence of chronic progressive cognitive decline. We therefore suspect that Socrates’ TLE was mild, stable, and relatively benign.

In the 2,400 years since Socrates’ death, few comments have been made on epilepsy and Socrates. According to Temkin’s history of epilepsy (1), the 17th century French physician Jean Taxil quoted Aristotle as mentioning Socrates as an epileptic among many others, including Empedocles and Plato (4). Taxil’s thesis was that all “demoniacs” were epileptic, and he used the word “epileptic” very loosely. Taxil apparently misinterpreted a passage from the Aristotelian Problems (5), which listed those philosophers as “melancholic.” Temkin concluded, “... there is no reason to assume that Empedocles, Socrates, and Plato suffered from epilepsy.” Our study offers evidence for reconsidering this conclusion regarding Socrates. In modern epilepsy literature, Lennox (2) quoted Symposium 174d-175c in his textbook of epilepsy, commenting, “Was this temporal epilepsy or was Socrates only ‘lost in thought’?” Lennox, however, stopped short of investigating this possibility and did not analyze all of the textual evidence.

The main reason that Socrates’ TLE has never been recognized is that the notion of epilepsy has been associated almost exclusively with the “falling sickness,” or generalized convulsive epilepsy. Hippocrates, a contemporary of Socrates, wrote a treatise on epilepsy titled The Sacred Disease (6), but he never considered the existence of a nonconvulsive form. TLE was recognized only toward the end of 19th century. Patients with mild cases of TLE, including Socrates, who only have sporadic SPSs and CPSs, and who seldom or never have a secondarily generalized seizure, were recognized only after EEG became available as a routine diagnostic tool in the late 20th century. Our study demonstrates that the knowledge of modern epilepsy can help achieve a deeper understanding of history and the humanities.

**REFERENCES**

Erratum

Socrates and Temporal Lobe Epilepsy: A Pathographical Diagnosis 2400 Years Later

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Table 1 on page 653 was typeset incorrectly. The publisher apologizes for this error. The correct Table 1 with the proper headings follows.

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