

THE PLAGUE OF ATHENS¹

G. D. Campbell*, Box 506, 3780 Richmond, Natal, Republic of South Africa

War with the Dorian will come, and a Death will come at the same time.

*Old Oracle*²

The Peloponnesian War between Athens and Sparta - two powerful nations - broke out in 430 BC and apart from a truce of seven years, lasted for 27 years. Within a short while of the first invasion by the Peloponnesians (Spartans) a disastrous disease broke out in Attica (the Athenian Region) killing in one estimate 300,000 people,³ this being the proximate cause of the ultimate defeat of the Athenians and the end of their civilisation. The War itself was meticulously documented by the Greek patrician, general and historian Thucydides whose literary style was superb and whose detailed yet simple description of the illness was very reminiscent of Hippocrates's writings. In more than one way Thucydides was born with a silver spoon in his mouth as his family's wealth came from silver mines in northern Greece. He was certainly the greatest historian of pre-Christian times and probably stands in the forefront of all humanistic historians.

In his account Thucydides describes how widespread the Plague had evidently been in North Africa and Persia⁴ and how it had appeared first in the busy Athenian ports.⁵ This strongly suggested an infective element as did the large number of doctors and nursing assistants who died from it.⁶ It would also appear certain that the Athenians were subjected to a gross degree of overcrowding in their urban laagers: otherwise one cannot satisfactorily explain why the Spartans had a relative immunity from the illness.⁷

Symptoms and clinical signs⁸ included severe headache, inflammation of the eyes, ulceration and bleeding in the mouth and throat, sneezing and hoarseness, chest pain, coughing and hiccoughs, abdominal pain and 'infective' retching, redness and small pustules on a cool skin (which was not pale) feelings of extreme warmth and skin sensitivity so that patients could not bear to have clothes on and were continuously anxious to jump into water to cool themselves and assuage a violent thirst; agitation, insomnia and total retrograde amnesia were found in most sufferers. Death generally occurred in a week, without wasting or loss of general condition. Most deaths were associated with uncontrollable diarrhoea. Peripheral gangrene was also observed. Those who recovered seem to have developed an immunity as they rarely had second attacks and in cases when this did occur, patients never died.⁹ Flesh-eating animals and birds apparently did not dare to eat the dead and appeared to have left the area.

An interesting recent proposal is that mycotoxins might have been involved either singly or by conditioning sufferers to the effects of other noxious processes due to their powerful anti-immune effects. The prevalence of the Plague in affluent and more highly socially placed Athenians was believed to be due to the importation of more expensive food from the Black Sea area which may have been fungus-infested.¹² That the Plague originated in North Africa and Persia would militate against this although these toxins might very well have been a contributory factor.

* Formerly Physician, Themba Hospital, Kabokweni, Kangwane

Although there was no mention of rats in Thucydides's account, a variable strain of *Yersinia pestis* must enter this consideration as an effective element was undoubtedly introduced by ships. It first appeared in Pireaus, the port of Athens, and spread so rapidly that the Athenians believed that their wheat supplies had been poisoned. A more recent account suggests that Ebola Haemorrhagic Fever may have been the cause because of the sharing of hiccoughs as a symptom in Ebola and the Plague.¹³ Further, the Plague originated in Abyssinia where the Green Monkey exists and, indeed, this animal was depicted in frescoes on Greek Islands. Against this is the relative immunity of the Spartans and the total lack of mention by the observant Thucydides of any haemorrhagic manifestations. Hiccoughs are a non-specific feature, possibly indicative of renal failure, and I believe that this suggestion can be discounted.

A strong case has been made for 'infection with influenza virus complicated by a toxin-producing strain of non-invasive staphylococcus'.¹⁴ An 'anatomical diagnosis' by these workers included: (1) Acute respiratory infection, severe or necrotising with 'verstile' staphylococcus, (2) Acute toxic gastroenteropathy, centrally mediated and (3) Bullous impetigo. Diseases ruled out include smallpox, bubonic plague, scarlet fever, measles, typhus, typhoid fever, cerebrospinal fever and ergotism.

FINAL COMMENTS

Thus an illness which broke the Athenian might and virtually destroyed a gracious culture as well as 300,000 human beings has been severally described as having been contributed to by a veritable fruit salad of disease processes. It is difficult after reading Thucydides and the many medical opinions which have been expressed to deny that a multiplicity of pathological processes was probably responsible.

There has been a remarkable resurgence of interest in the Plague in the last few years. Suffice it to say that this interest in a catastrophic illness of 2,400 years ago will endure as long as medical and writers of history exist, but whether valid conclusions as to its identity (or identities) can ever be drawn is questionable in the absence of new information which is not likely to be forthcoming.

REFERENCES

- ¹ Thucydides, 404 BC. *History of the Peloponnesian War*. Transl. by Warner R., 1954. Rev. ed. 1972.
- ² *Ibid.* Introduction, 9.
- ³ Holden C. Random samples. *Science* 1996; **272**: 1591-3
- ⁴ *Ibid.* Book 2, para 48.
- ⁵ *Ibid.* Book 2, para 48.
- ⁶ *Ibid.* Book 2, para 51.
- ⁷ *Ibid.* Book 2, para 54.
- ⁸ *Ibid.* Book 2, para 49.
- ⁹ *Ibid.* Book 2, para 49.
- ¹⁰ *Ibid.* Book 2, para 51
- ¹¹ Bellemore J, Plant IM, Cunningham LM. Plague of Athens: fungal poison? *J Hist Med Allied Sci* 1994; **49**: 521-45
- ¹² *Ibid.* Book 2, para 48.
- ¹³ Leader. *New Sci* 1996; 25 June: 5.
- ¹⁴ Leader. *N Engl J Med* 1985; **313**: 1027