

The Last Days of Sala al-Din (Saladin) “Noble Enemy” of the Third Crusade

Philip A. Mackowiak, MD, MBA, MACP

ABSTRACT Saladin, “noble enemy” of Richard the Lionheart and victor at the battle of Hattin, died suddenly in 1193 A.D. at the age of 56. The clinical information preserved in the historical record is insufficient to render a definitive diagnosis for Saladin’s final illness, and yet, it contains enough details to narrow the list of possibilities to just a few and also to critique his treatment in light of the medical concepts of his day.

Of all the warriors who fought in the series of conflicts known as the Crusades, none cast a larger shadow over the era than Sultan Yusuf Sala al-Din (Saladin) (Fig. 1)—one even larger than that of his most famous adversary, Richard I (“the Lionheart”). It was Saladin who annihilated King Guy’s army at the Horns of Hattin in 1187 A.D. and reclaimed Jerusalem for Islam¹ after it had been ruled by the Franks (a Christian coalition of French speakers from France, Normandy and Flanders, Normans from Sicily and Italy, Knights from Spain, and small numbers of Germans and Englishmen) for nearly a century.² In so doing, Saladin was the one who brought Richard and Philip II (Augustus) of France to Palestine at the head of a Third Crusade. And then it was Saladin who met them, denied them Jerusalem, and forced them to abandon their quest to free the Holy Land from the Muslims.

Although Saladin’s victory over Frankish forces at Hattin was one of the most spectacular in military history, he became a figure of myth and legend more for his image as the “noble enemy” than for his victories on the battlefield.² For he, more than the Frankish knights who opposed him, exemplified chivalrous ideals in his conduct both as military leader and civil servant.² Largely unfamiliar to Westerners today, he was an uncommonly charismatic warrior, revered even by his enemies for his unflinching commitment to personal honor during a period of some of the bloodiest and cruelest chaos Palestine has yet known.³ His life was cut short by an undiagnosed illness, that has much to tell about the history of military medicine, and about Maimonides, Galen, and the Hippocratic Corpus.

Saladin was born in 1138 A.D. in Tikrit. He was a Kurd whose family originated from a highland village in Greater Armenia.² Little is known of his youth and what information there is, is contradictory.¹ It is known that when he was 18, he was appointed deputy to his uncle, Shirkuh, who was then military governor of Damascus. At the age of 26, he accompanied Shirkuh as quartermaster-general of a Syrian expeditionary force that defeated a Frankish-Egyptian army commanded by King Amalric at the battle of Ashmunain. It was the

second of three invasions of Egypt by Syria between 1164 A.D. and 1169 A.D. Saladin’s performance during the campaign, directing troops in action and defending Alexandria, gave the Franks their first glimpse of the generalship of the man who would harass them for the next two and a half decades. When Shirkuh died suddenly in 1169 A.D., Saladin replaced him at age 30 as commander-in-chief of the Syrian army² that all but drove the Franks from the Holy Land.

Only fragments of Saladin’s medical history have been preserved for posterity. They were recorded by Beha Ed-din, a close associate and an eyewitness to events involving the sultan from 1188 A.D. (when he was 50) until his death in 1193 A.D.⁴ Though generally regarded as a credible historian, Beha Ed-din was not a physician. Moreover, his account of Saladin’s medical history, while lucid, is only moderately detailed.

Saladin’s first serious illness, according to Beha Ed-din, began in December 1185 A.D. in Harran, when the sultan was 48.⁴ The illness lasted more than 2 months and was so severe that when Beha Ed-din saw Saladin in late February 1186 A.D., he expected him to die. Beha Ed-din did not record Saladin’s signs or symptoms, although others have speculated that fever was a prominent feature of the illness. Moreover, we do not know whether other subjects or associates of the sultan were similarly affected, in which case malaria, typhoid fever, or one of the many other gastrointestinal infections that plagued armies before the advent of modern sanitary practice would have been a likely diagnosis. Whatever the etiology of his illness, by mid-year, Saladin looked like “a man risen from the dead.”²

Saladin’s health thereafter seems to have waxed and waned. Newby² claims that after the above illness, the Sultan had “recurrent bouts of fever and colic,” although Newby does not elaborate on the nature of the “colic.” Even so, it is clear from Beha Ed-din’s account that Saladin’s recovery was sufficient to allow him personally to lead troops in battle on several occasions after his illness in Harran.

In October of 1190 A.D., Saladin had an attack of what Beha Ed-din called “bilious fever.”⁴ The illness was severe enough to confine the sultan to his bed and lasted well into November. An associate, Zein Ed-din Yusuf, Lord of Arbela, was similarly affected with “two successive fevers,” suggesting that both his illness and Saladin’s were characterized by a

Medical Service-111, VA Medical Center, 10 N. Greene Street, Baltimore, MD 21201.



FIGURE 1. Statue of Saladin in Damascus. Although no real-life portraits of Saladin exist, his biographies give the impression that he was tall, dark (both by inheritance and constant exposure to the sun), bearded, and thin (having spent most of his life in the saddle and having been notoriously abstemious in his eating).

periodic fever and perhaps also jaundice, in which case malaria would have been their likely diagnosis. Beha Ed-din believed that the illness developed because “the air of the plain of Acre [where they were then encamped] had been made unhealthy by the great number of dead left by either side on the field.”⁴

Whatever the cause of this illness or Saladin’s earlier one, Palestine was then a decidedly unhealthy place. King Amalric of the Franks succumbed to dysentery at the age of 38 in 1174 A.D., leaving control of the Latin Kingdom to his leprous son, Baldwin. Richard the Lionheart fell ill shortly after arriving at the head of the third Crusade and then again while negotiating a truce with Saladin just before his departure from Palestine in September 1192 A.D.² Virtually nothing is known of the nature of his latter illness. However, Beha Ed-din tells us that at his request, Saladin provided Richard with fruit and snow.⁴ King Philip of France abandoned the Third Crusade, at least in part, because of illness (character unknown). Although Saladin was informed that he died at Antioch before he could reach home,⁴ in fact, Philip recovered, returned to France, and immediately took up arms against the vast Plantagenet domain of his former lover, Richard. With regard to crusaders of lesser station, Newby estimates that in the 2-year siege of Acre (1189–1191 A.D.) alone, the Franks “lost 100,000 men, rather more from disease than in battle”... Saladin’s army far fewer.²

The diseases afflicting warring armies before the advent of modern public health concepts and interventions were largely the consequence of intestinal pathogens that circulated among troops because of poor sanitation, as well as arthropod-borne infections endemic to campaign sites, sexually transmitted diseases, and infections whose transmission was facilitated from person to person by the crowded conditions of military encampments. Given the prevalence, diversity and severity of the disorders confronting the armies of Saladin and his antagonists, the inadequate sanitation, and the lack of immunizations and basic medical care, one marvels that any of the

participants in the Crusades survived long enough to provide posterity a record of their experiences.

Saladin seems to have weathered reasonably well both his illnesses and the rigors of campaigning for two and a half decades before being overtaken by his final illness. It struck when he was 56 and already beginning to show the physical and psychological effects of the privations and trauma of unrelenting combat. By then he complained: “I am an old man now. I have no longer any desires of pleasures of the world. I have had my fill of them and have renounced them for ever...”²

When Beha Ed-din visited him in February 1193 A.D., Saladin had lost his appetite and complained of weakness, lassitude, and indigestion. The weather was damp and cold, and yet Saladin set out on horseback without the quilted tunic he always wore in public and “seemed like a man waking from a dream.” In the evening, his lassitude increased and “a little before midnight he had an attack of bilious fever, which was internal rather than external.” The next day his fever was worse. However, when “it was suppressed” (by unknown means), he seemed to improve and to take pleasure in his conversation with Beha Ed-din. Nevertheless, “from that time, the sultan’s illness grew more and more serious,” with headaches of mounting intensity. Those in attendance began to despair for his life, all the more so because of “the absence of his chief physician, who knew his constitution better than anyone.” After having been bled on the fourth day of his illness, Saladin “grew seriously worse, and the humours of the body began to cease their flow.” On the sixth day, his attendants propped him into a sitting position and gave him luke warm water “as an emollient after the medicine he had taken.” During the next 2 days, his condition deteriorated as his “mind began to wander.” By the ninth day of illness, he was stuporous and “unable to take the draught that was brought to him.” His subjects, sensing his end was near, were “afraid and began to carry away their goods out of the Bazaars.” On the tenth day, a clyster was applied twice, which seemed to give Saladin relief. He took a few sips of barley-water. That night he began to perspire, which his attendants regarded as a hopeful sign. By the next day, “the perspiration was so profuse that it had gone right through the mattress and the mats, and the moisture could be seen on the floor.” On the twelfth night, Saladin grew weaker, wavering in and out of consciousness. His attendants expected him to die. However, he lingered on until the fourteenth day of illness and “died after the hour of morning prayer, on Wednesday, the 27th of Safer, in the year 589 (March 4, 1193 A.D.).”⁴

The specific disorder that carried off Saladin is a secret not likely ever to be told. The clinical information provided by Beha Ed-din is insufficient to render a definitive diagnosis, and yet, it contains enough details to narrow the list of possibilities to just a few—ones capable of explaining a fatal illness with an acute onset and subacute course, heralded by lassitude, weakness, and indigestion, and dominated by fever (bilious?), headache, progressive disorientation, and profuse sweating.

The combination of fever, headache, and progressive disorientation suggests that Saladin's fatal disorder was an infection and that its primary focus was the brain, in that headache and disorientation were the earliest manifestations of his subacute illness. Of such infections, only a few are worth considering: tuberculous meningitis and viral encephalitis (due to Herpes simplex, West Nile virus, or other arthropod-borne viruses). Saladin's profuse perspiration, which according to Beha Ed-din began at night and might therefore have represented "night sweats," while certainly not specific for tuberculosis (an infection likely hyperendemic in Medieval Palestine^{5,6}), would be more consistent with this diagnosis than a viral encephalitis. If the "bilious fever" reported by Beha Ed-din was indicative of both jaundice and fever, leptospirosis would be a likely diagnosis, given Saladin's altered mental status. Unfortunately, because the meaning of medical terminology has evolved over time, we cannot be certain that "bilious fever," as used by Beha Ed-din to characterize the sultan's illness, necessarily indicated the presence of either jaundice or fever as we recognize the conditions today.

Saladin's terminal illness was atypical of typhoid fever by today's standards, lacking abdominal pain and having an altered sensorium as its earliest and most prominent feature. Likewise, cerebral malaria is unlikely in that, at least in modern times, it is a complication of falciparum malaria seen almost exclusively in children, owing to their lack of immunity to the parasite.⁷ The absence of a rash and also the fact that even in the twelfth century, "Moslems were particular about their bathing and their beards"¹ (in contrast to their Frankish counterparts), render epidemic typhus equally unlikely. The subacute course of the illness (14 days) all but excludes pneumococcal meningitis and meningococcal meningitis from consideration but not listeriosis.

Beha Ed-din's account of Saladin's final illness has perhaps even more to tell about the nature of medicine in the sultan's court than it does about his diagnosis. The "chief physician" to whom Beha Ed-Din refers might possibly have been Maimonides (1135–1204 A.D.), who was appointed court physician by Saladin's vizier, Al Fadil, in 1187 A.D., 6 years before the sultan's death and subsequently became the personal physician of Saladin's eldest son, Al Afdal. Maimonides, like his Arab counterparts, was a product of the Hippocratic School and an acolyte of Galen. His compendium of medicine was largely an attempt to clarify Galen's interpretation of Hippocratic concepts.³

Although the humoral theory lies at the heart of Hippocratic concepts of health and disease, there was no single such theory to which all Hippocratic physicians subscribed. The most widely accepted maintained that health is determined by a proper balance between four vital humors (blood, phlegm, yellow bile, and black bile), and disease is the consequence of imbalances in these humors ("dyscrasias"), the specific character of which determines both the nature of the disorder and its treatment.⁸

Beha Ed-din's personal belief in the humoral theory is reflected in his comment that: "the humors of the body [of Saladin] began to cease their flow" immediately after he was

bled. Likewise, the bleeding indicates both a commitment of Saladin's physicians to Hippocratic doctrine and their attribution of the sultan's illness to a humoral dyscrasia, which they hoped to alleviate by altering the distribution of the vital humor(s) responsible for the dyscrasia.

Beha Ed-din reported that Saladin's "bilious fever" was "internal rather than external." Hippocratic physicians favored such a binary classification of diseases, separating those due to some internal cause from ones provoked by external factors. Those arising from things inside the body included dyscrasias of bile, phlegm, and the other humors. Those originating from sources outside the body were related to "exertions and wounds, and from heat that makes it too hot, and cold that makes it too cold."⁸ As noted above, Beha Ed-din placed Saladin's disorder in the former category.

Saladin was treated with blood letting, clysters (enemas), and medicines and drafts of unknown composition. In *Disease II* (another of the Hippocratic treatises), the recommended treatment for diseases of the head includes not just three types of evacuants (of which Saladin received only one that we know of), but also no fewer than eight cauterizations of the skull (of which he apparently received none), two beside the ears, two on the temples, two in back of the head, and two on the nose near the corners of the eyes.⁸

With regard to the second form of treatment, Hippocratic physicians used vomiting and bowel evacuations as both preventative and curative measures. Interestingly, good hygiene was thought to require "that vomiting be induced in winter and bowel evacuation in summer."⁸ As explained by the author of *Nature of Man*:

"Emetics and clysters for the bowels should be used thus: Use emetics during the six winter months, for this period engenders more phlegm than does the summer, and in it occur the diseases that attack the head and the region above the diaphragm. But when the weather is hot use clysters, for the season is burning, the body bilious, heaviness is felt in the loins and the knees, feverishness comes on and colic in the belly. So the body must be cooled, and the humours that rise must be drawn downwards from these regions."⁸

Saladin's disease of the head was treated with clysters in late February–midwinter. Moreover, the clysters were administered on the tenth day of his illness, when he was clearly moribund, which was contrary to one of the fundamental precepts of Hippocratic doctrine—a prohibition against treating patients judged to be incurable.⁸ Thus, in two respects, the physicians who treated Saladin during his final illness appear to have violated Hippocratic standards of practice.

Hippocratic physicians were ambivalent about medicines. *Pharmacopoles*, the forerunners of modern pharmacists, sold both poisons and medicines under the ambiguous title of *pharmakon*, suggesting that the disciples of Hippocrates were as concerned as their modern counterparts about the capacity of drugs to harm patients as to help them.⁸ Although



FIGURE 2. Map of the Near East in 1190 A.D. showing Saladin's dominions 3 years before his death.¹¹

the specific medications with which Saladin was treated are unknown, it is likely that they were dictated by the "Doctrine of the Signatures," then in vogue in the Levant.⁹ According to such doctrine, the way plants (and presumably animals and minerals) look, feel, taste, or react dictates their proper clinical application. Treatments were based on similarities between therapeutic substances used and the diseased human organs, correlation between the color of the substance and the color of the patient, similarities between the substance and the patient's symptoms, and the use of substances that might produce symptoms of particular diseases in healthy persons to remedy those same symptoms in ones who were sick. The shape of a walnut seed, for example, which has features similar to that of the human brain, was "favored as a treatment for clearing and curing the brain during the Middle Ages."⁹

When Saladin's counter-Crusade was over and his eyes closed in death, he was so poor there was not even enough of the vast wealth he had conquered left to pay for his funeral. So irresistible had been his impulse for giving, "in his treasury there remained only one Tyrian gold piece and forty-seven pieces of silver."¹ None of his 17 sons inherited Saladin's generosity or statesmanship. Shortly after their father's death, they began fighting among themselves over his empire (Fig. 2) and in just a few years, had reduced it to a fragmented pastiche of powerless states.

Beha Ed-din outlived his master long enough to see Jerusalem return to the Franks, as Saladin had feared. Emperor Frederick II negotiated its surrender with Saladin's nephew, al-Kamil in 1229 A.D.² Had the sultan not succumbed to his final illness but lived on a while longer, it is not likely that the course of history would have been different. For "evil old age that comes to all"¹⁰ was already heavy upon Richard's "noble enemy."

ACKNOWLEDGMENTS

I am grateful to Stuart C. Ray, MD of the Johns Hopkins University School of Medicine for suggesting Saladin as a subject worthy of such an analysis and to Dr. Frank M. Calia, Wayne Millan, and Larry Pitrof for editorial advice.

REFERENCES

1. Rosebault CJ: Saladin. Prince of Chivalry, pp 62, 128, 173, 194-6. New York, Robert M. McBride and Co., 1930.
2. Newby PH: Saladin in His Time, pp 14, 29-30, 39, 50, 53, 65, 79-80, 104-105, 119, 130, 158, 181, 183, 198-199. New York, Dorset Press, 1983.
3. Herschel AJ: Maimonides (translated from German by Neugroschell J), pp 51, 182, 213-215, 233. Toronto, McGraw-Hill Ryerson, 1982.
4. Beha E-D: The Life of Saladin, pp 102, 126, 217-219, 229, 304, 379, 400-406. London, Committee of the Palestine Exploration Fund, 1897.
5. Dubos R, Dubos J: The White Plague: Tuberculosis, Man and Society, pp 6-7. Boston, MA, Little, Brown, and Co., 1952.
6. Dormandy T: The White Death: A History of Tuberculosis, pp 4-5. New York, New York University Press, 2000.
7. Roth H: 100 Cases of Cerebral Malaria. *E African Med J* 1956; 33: 405-7.
8. Jouanna J: Hippocrates, pp 107, 130, 146, 156, 181, 316, 325-327. DeBevoisse MB (trans.). Baltimore, MD, Johns Hopkins University Press, 1999.
9. Lev E: The doctrine of signatures in the Medieval and Ottoman Levant. *Vesalius* 2002; 8: 13-22.
10. Homer: The Iliad, p 65. Rees E (trans.). New York, Barnes and Noble Classics, 2005.
11. Shepherd WR: Europe and the Mediterranean Lands about 1190. Austin, TX, University of Texas, 1911. Available at http://www.lib.utexas.edu/maps/historical/sheperd_1911/sheperd-c-070-071.jpg; accessed XXX.