

Noble Heart

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A 35-year-old man presented with fever, rash, and anasarca. His illness began suddenly in late November during the course of a local epidemic of a similar disease. Although he had a long history of varied medical complaints, the patient had been feeling well during the year prior to his present illness, which began acutely with high fever, headache, and diaphoresis. These symptoms were accompanied by swelling of the hands and feet, which over the course of a few days progressed to anasarca so severe that the patient had difficulty turning in bed. By the second week of illness, he complained of foul taste and generalized aching and was having recurrent episodes of projectile vomiting and diarrhea. He was so swollen and weak by this time that he was able to sit up in bed only with assistance. His mental faculties remained intact.

The patient had had numerous illnesses during his life. As an infant, he likely suffered from malnutrition, in that his principal source of nourishment at that time was a mixture of honey-water and barley gruel. At age 6, he had a 4-week illness diagnosed as erythema nodosum. At 7 and 10 years of age, he had episodes of fever and polyarthritides, which are believed to have been attacks of acute rheumatic fever. When he was 9, he and his sister developed a febrile illness accompanied by delirium and wasting that was most likely either typhus or typhoid fever. He had a history of recurrent pharyngitis, the first episode of which occurred at age 8 and may have been complicated by a peritonsillar abscess. He contracted smallpox at age 11, and at age 16 developed jaundice of undetermined etiology. He then enjoyed reasonably good health until age 26, when he had an episode of profuse diaphoresis, severe colic, and vomiting. Because other persons in his city were similarly affected, this illness is presumed to have been some form of infectious gastroenteritis. In his 30s, he suffered with intermittent headaches, tonsillitis, arthralgias, stomach cramps, and toothaches. These were particularly troublesome during his 34th year, and may

have been magnified by anxiety related to persistent financial difficulties and his wife's ill health (recurrent inflammation of varicose veins). He sought relief from these symptoms through various unspecified medications. During the year before the present illness, these complaints appear to have abated, although after his death, his wife reported that he had had brief bouts of illness in September and October but had continued to work.

The patient was one of seven children, only two of whom survived beyond infancy. His sister, nearly 5 years his senior, was alive and well. When the patient was 22, his 57-year-old mother died of an acute febrile illness thought to have been typhoid fever or, perhaps, tuberculosis. His father, who had long suffered with rheumatism, died at age 77 of presumed coronary artery disease, 4 years before the patient's current illness.

The patient was a celebrated musician and composer. He was married and had two healthy sons. He drank wine and beer in moderation and occasionally smoked a pipe. He had traveled extensively in western Europe. He had a pet canary and dog. The canary had recently been removed from the patient's room, because its song had become irritating to the patient.

The patient was lying in bed dressed in an open-back gown made especially for him to facilitate dressing. He was alert and oriented but appeared acutely ill. He was warm to the touch and perspiring profusely. His left ear was flat with a poorly developed antihelical curve. (His younger son shared the same malformation.) Gross anasarca was present, as well as a diffuse macular rash over the chest and abdomen.

The patient's clinical course was dominated by persistent fever, diaphoresis, and increasing anasarca. On the 14th day of illness, his condition deteriorated sharply, with the first signs of delirium. Venisection was performed, followed by cold compresses to his head. Coma ensued and the patient died in the early morning of the 15th day of illness. No autopsy was performed. [Case history extracted from references (1-9).]

DIFFERENTIAL DIAGNOSIS

Faith T. Fitzgerald, MD: A 35-year-old man dies of a febrile disease in the midst of a local epidemic. Two hundred years later, multiple papers have been written about this, and swirling speculations attribute his death to as many as 118 causes (10), from murderous malevolence to

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Table 1. Differential Diagnosis: Short List of Proposed Causes of Mozart's Death (3, 9–16)

Renal disease—many types	Acute viral illness
Liver disease	Bacterial sepsis
Poison (arsenic, mercury, lead)	Influenza
Cerebral hemorrhage, hematoma	Still's disease
Stroke, embolic	Bacterial meningitis
Bronchopneumonia	Thyrotoxicosis
Iatrogenic hypovolemia plus anemia	Vasculitis
Syphilis	Hypertensive encephalopathy
Typhus	
Tuberculosis	
Ergotism	
Malnutrition	
Psychotic depression	
* Infective endocarditis	
* Acute rheumatic fever	

* Most likely, in my opinion.

arcane vasculitis (Table 1). Why all the excitement now, when then he was unceremoniously buried in a communal lime pit? Because he was Wolfgang Amadeus Mozart.

Since his death, Mozart has rightly achieved the status of one of the illuminati, and people seek a reason for his death proportionate to the loss. We are disquieted when extraordinary persons die of ordinary things. It violates our sense of cosmic balance: he is culturally supernatural, so natural death will not do. Poor Salieri, Mozart's "rival," is now more famous for his supposed role as Mozart's assassin than for his musical compositions. Of course, Salieri "confessed" to poisoning Mozart—but he was so demented at the time (9,11) that he probably, if asked, would have confessed to poisoning Julius Caesar.

People writing about Mozart's death (including the major source of the description of Mozart's final illness—Georg Nikolaus Von Nissen, the man who married Mozart's widow) (12) gain some glory and profit by having "secret knowledge" of famous men. And multiple doctors also, for fun or by obsession, have opined in print on Mozart's mysterious death—which would not have been mysterious at all if it had been Wolfgang Amadeus Müller who died that December night.

Greater history confounds medical history. The story is told of an old doctor in a town in eastern France who set forth on a blustery, rainy night in the early 19th century to attend a woman in childbirth. He returned exhausted hours later, soaked through and chilling. His wife, worried that he might catch pneumonia, admonished him about going out and working so hard in such inclement weather. The old doctor, now febrile, looked at her with pale face but sparkling eyes and gasped between coughs: "True, true . . . my dear . . . I am too old, but it was worth it! Do you know who was born tonight? Victor Hugo, that's who!" Similarly, when Ivan the Terrible was born, lightning struck the Kremlin; the crew working on King

Tut's tomb died terribly and prematurely; John Kennedy was done in by the Mafia. Because the death of great men excites written commentary, elaborated upon as the years go by, we create a kind of grand gossip, "chart lore" on a large scale. It gains credence simply because it is written down. Speculation is bolstered by references to speculation, and so becomes "true." This is not so different in the modern era: witness e-mail urban legends.

Stripping through the accretions and encrustations of time, we should examine the "facts"—so far as we can—as putatively reported by the two major witnesses at Mozart's sickbed: his wife and his sister. It is from these that the printed case description is largely derived. And we will apply to these sparse data the Law of Parsimony as articulated by William of Occam: "*Non sunt multiplicanda entia praeter necessitatum*" or—loosely translated—"don't think of more reasons than you need." This is Occam's Razor—with which it must be remembered—many clinicians have slit their throats.

Mozart had an illness of abrupt onset after a year of incredible activity and creative productivity. It was sudden, severe, and killed him in 2 weeks' time (13). What sort of affliction has such a brutal onset, rash, fever, swelling, and moderately rapid death? Infection is overwhelmingly likely, although others have cited toxins [none really fits (3,14)] or the exacerbation of chronic subclinical disease of liver or kidney (15), or vasculitis (9,12). To my mind, neither hepatic nor renal disease—both of which can give anasarca—seem likely in the absence of antecedent illness, the clarity of his mind to nearly the end, and the presence of fever and joint pain, rash, and swiftness of death. Mozart's malformed ear suggested to some medical historians a malformed kidney—but his youngest son also had "the ear" and lived, for his time, a normal lifespan of 53 years (12).

Most significant, to my way of thinking, was the city epidemic of "miliary fever" and Mozart's history of rheumatic fever as a child, pharyngitis and tonsillitis recurrently since, and an illness characterized by painful swelling of his hands and feet, fever, truncal rash appearing early in the course of things, anasarca, irritability, and his final—but only final—delirium and coma.

What was the epidemic? Miliary fever? It could have been anything characterized by a punctate rash (like millet seeds). Rheumatic fever was one of the most common miliary fevers epidemic at that time, as was another streptococcal disease, scarlet fever, and no doubt many other viral and bacterial infections. Syphilis, another suggested cause of Mozart's death, is less likely: by the end of the 18th century it was less epidemic (more endemic, that is, "settled" into a population rather than periodically sweeping through it) and less virulent in its secondary stage—the stage of fever and rash. And it did not typically cause anasarca, although it could.

Why was Mozart so swollen? The initial swelling, with

painful hands and feet, seems inflammatory. The total body swelling, progressing over the course of illness, was something else. The commonest causes of anasarca are liver disease, protein wasting, kidney disease, and heart failure. As I do not have evidence for liver or kidney disease, could this have been congestive heart failure? It surely could.

Anasarca caused by heart failure seems likeliest to me, with nausea and vomiting and diarrhea caused by edema of the bowel—all occurring during the second week of illness. And that illness is likeliest rheumatic fever. A contemporary eminent Viennese doctor named von Lobes actually described the epidemic, not as miliary fever, but as “a rheumatic and inflammatory fever . . . which attacked many people . . .,” a large number of whom succumbed with symptoms very much like the composer’s (16).

Rheumatic fever is an immunologic response in some persons to certain strains of streptococcus, affecting the heart, joints, skin and brain—probably by the generation of antibodies to these tissues cross-reactive to certain streptococcal antigens (17). Mozart, who reportedly had more than one episode of rheumatic fever as a child, was susceptible to recurrences. His periodic sore throats might have produced further subclinical cardiac damage. He would have had to acquire yet another streptococcal pharyngitis 1 to 5 weeks before his death if it were from acute rheumatic fever, but only 50% of victims actually remember an antecedent sore throat (18). Mozart was out and about, moving in crowds at a time and in a place of epidemic streptococcal infections.

Here is what William Osler had to say about acute rheumatic fever in the early part of the 20th century (19): “. . . the disease sets in abruptly . . . the fever rises quickly . . . in the majority of cases there are profuse acid sweats . . . miliary vesicles are abundant in the skin . . . surrounded by a minute ring of hyperemia. An erythema multiforme type of skin lesion is not infrequent. The mind is clear. The affected joints are painful to move, soon become swollen and hot . . . perhaps no disease is more painful at times . . . inability to change the posture without agonizing pain. Myocarditis is present probably always in some degree . . . dilatation of the heart occurs. Cerebral complications [are] characterized by delirium, coma or convulsions. There are emotional disturbances such as . . . may become cross and irritable . . . a complete change of character [manifestations of cholera—is this why Mozart threw out his formerly beloved canary?] There may be headache . . . [and] digestive disturbances. Sudden death in rheumatic fever is due most frequently to myocarditis. . . .” Presumably by arrhythmia or heart block.

This sounds very much like our patient—and although epidemic rheumatic fever is unfamiliar to 21st century American physicians, it is still familiar to doctors from

Table 2. Jones Criteria Rheumatic for Fever, Revised (26)*

Major
Carditis
Polyarthritits
Chorea
Subcutaneous nodules
Erythema marginatum
Minor
Fever
Arthralgia
Laboratory findings (unavailable in Mozart’s time)
Previous rheumatic fever
Inactive rheumatic heart disease

* Diagnosis established by the presence of two major or one major and two minor criteria.

developing countries, and even pops up in middle-class US suburbia now and then (20–25). In general, penicillin prophylaxis in our country has obviated the worst that rheumatic fever can do. But there was no penicillin for Mozart; there was not even a stethoscope (invented a quarter century later) to add credence to or detract from my hypothesis.

Using Jones criteria (revised) for rheumatic fever (Table 2) (26), Mozart can be said to have potentially had four of five major criteria (carditis, polyarthritits, chorea, erythema marginatum—but not subcutaneous nodules, which he had had as a child but which were almost unheard of in adults). Of minor Jones criteria—omitting laboratory studies, which were nonexistent—he had at least four (fever, arthralgia, previous rheumatic fever, and probable inactive rheumatic heart disease). If it takes but two major or one major and two minor Jones criteria to diagnose rheumatic fever, then that is what he had. Others agree (3,13).

In the final analysis, who knows? Maybe the heavenly choir just wanted a choirmaster worthy of their celestial talent.

Dr. Fitzgerald’s diagnosis: Acute rheumatic fever, with carditis, polyarthritits, erythema marginatum, and possibly, chorea.

HISTORICAL DISCUSSION

Mozart’s Special Physical and Mental Assets

Neal Zaslaw, PhD: Mozart at 33 is pictured in a silver-point drawing (Figure 1) by Doris Stock (Vienna, 1789) (27). This slightly built man had a profusion of fine, light-brown hair, about which he was said to be excessively vain. At a time when a shaven head was a way to avoid lice, and men of the middle and upper classes wore wigs, Mozart sported his own hair, carefully dressed to cover his ears, one of which was, as mentioned by Faith Fitzgerald, abnormal. A lithograph from 1828 (Figure 2) pur-



Figure 1. Mozart at age 33. Silverpoint drawing by Doris Stock, Vienna, 1789.

ports to show a normal ear and Mozart's ear, although the latter is actually Mozart's son's ear (28).

Of course, musicians have no interest in the appearance of Mozart's external ear but a profound interest in the workings of his inner ear. A Salzburg neighbor of the Mozart family who was a professional musician, Johann

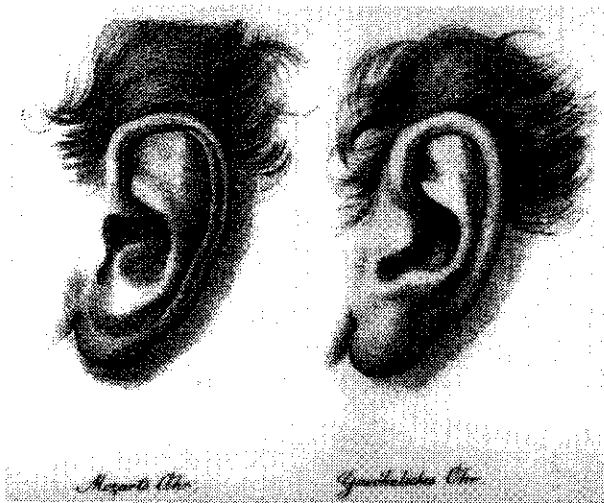


Figure 2. Mozart's ear compared with a normal ear. Lithograph from Georg Nikolaus von Nissen, *Biographie W. A. Mozarts*, Leipzig, 1828.

Andreas Schachtner, recalled that one day the child Mozart paid him a visit and amused himself by playing on the neighbor's violin, which he particularly liked. A day or two later, when the neighbor dropped by to see the Mozarts, the child was playing on his own violin and remarked offhandedly: "Your violin is tuned half a quarter tone lower than mine, if you left it tuned as it was last time I played it." This so astounded the neighbor that he fetched his violin immediately and discovered that Mozart's memory was correct (29,30).

In psychoacoustical terms, "half a quarter tone" means a difference of 25 cents—cents being a logarithmic scale used to measure distances between pitches, where 100 cents equals the distance between any two adjacent semi-tones as found, for instance, on the modern piano. Because the JND, or "just noticeable difference," of human pitch perception has been established at around half a cent, a difference of 25 cents can readily be perceived by anyone confronted with the two pitches in close juxtaposition (31). It can be recalled, however, only by someone who, like Mozart, has well-developed absolute pitch, which is the ability to recognize or produce any musical pitch in the absence of other pitches. Although absolute pitch is found in fewer than 1% of the general population, it occurs in a much greater percentage of musicians, presumably because persons with absolute pitch are attracted to music, and because those with the predisposition plus early musical training are the ones most likely to develop the trait. Recent unpublished research undertaken at the Eastman School of Music by Elizabeth West Marvin and Peter Gregorsen, for instance, has found that 15% to 17% of the students there have absolute pitch. Although absolute pitch seems supernatural to those who do not have it, its importance should not be exaggerated; many successful composers and performers have not had absolute pitch.

A note to the anecdote of the two violins tuned 25 cents apart: You may wonder how, before the invention of Helmholtz resonators in the 19th century and of oscilloscopes in the 20th, musicians could have quantified such a small difference in pitch. The answer is, either by counting the number of beats per second when two tones were played simultaneously or by noting the pitch of the so-called "difference tone." (Difference tones do not exist in the air but rather are created by the alinearity of the bones of the inner ear.)

Mozart's ear and his memory are revealed by another incident, which occurred in Rome in 1770 when Mozart was 14. He and his father went to the Sistine Chapel on the Wednesday of Holy Week, hoping to hear a renowned setting of the penitential psalm, *Miserere mei Deus* ("Have mercy upon me, O God"), written by a 17th-century composer named Gregorio Allegri. This work, which calls for a group of four soloists alternating with both a five-part choir and a group of monks intoning Gregorian

chant, was the property of the popes and not performed elsewhere. The choir did in fact sing that piece, after which Wolfgang went to the place where he and his father were staying and wrote it down from memory. The next day they returned to the Sistine Chapel, with Wolfgang hiding his transcription in his hat so he could check it, but a different composition was sung. However, when they returned on the third day, Allegri's *Miserere* was sung again, enabling Wolfgang to correct his transcription (29,30,32,33). If you were to purchase a recording of Allegri's work and discover that it lasts about 13 minutes in performance, you might marvel at Wolfgang's abilities of hearing and memory. But this feat has been misunderstood. Musicians are taught to write down music from dictation, and the most talented and best trained among them do it with considerable fluency. What no modern account of this incident reveals about Allegri's *Miserere* is that, leaving aside five verses in Gregorian chant, the remaining six verses are accommodated to only a minute and a half of Allegri's music, which is repeated five and a half times, probably while being ornamented by the soloists. Hence Wolfgang would have heard Allegri's music 10 times, not once (as most biographies state) nor twice (as Leopold's report of the incident seems to imply). Although Wolfgang was an extremely gifted and well-trained musician, he was not, at least on this showing, possessed of supernatural powers.

Now consider another story. In 1778, when Mozart (aged 22) attended a salon in Paris, a reigning maestro there, named Giuseppe Cambini, paid Mozart the compliment of going to the piano and playing from memory a piece by Mozart. Wishing to return the compliment, Mozart likewise went to the piano and began to play from memory a piece of Cambini's. After playing the opening section of Cambini's piece, Mozart could not recall how the work continued, so on the spot, he improvised a brilliant new ending (32,33). This certainly did not endear him to Cambini who, being well placed, apparently later made efforts to impede Mozart's opportunities in Paris. This anecdote, reported by Mozart himself, suggests that his recall of the musical compositions of others varied according to his level of interest.

A series of independent reports by three learned men—an Englishman, Daines Barington of the Royal Society (who examined Mozart in London in 1765), a Swiss, Auguste Tissot (who examined him in Lausanne the following year), and a German resident in France, Friedrich Melchior von Grimm (who examined him in Paris in 1764 and 1766)—provide an intriguing glimpse of Mozart's talents and personality as a child. Each of these eyewitnesses judged that young Mozart possessed the interests, personality, and emotional make-up of a well-adjusted child of his age. The 8-, 9-, and 10-year-old Mozart could, they reported, play or sing to perfection

any music put before him and improvise convincingly in several styles, and had already composed considerable music in an up-to-date, although not necessarily highly original, vein. Tissot and Grimm also promulgated the notion, seized upon by Romantic biographers, that a person is born with a finite store of vital essence, and if that essence is consumed with an intensity such as they perceived in the young Mozart, it would likely be exhausted prematurely, leading to early death (29,30).

Mozart, of course, did die young, whether by 18th- or 20th-century standards. The great increase in life expectancy on which modern medicine rightly prides itself has much to do with an extraordinary decrease in infant mortality. Mozart and his sister, for instance, were the two surviving children of their parents' seven births; Mozart and wife likewise had six children of whom only two survived. If, however, one inquires into the life expectancies of those who reached adulthood then and now, the differences, while still significant, are much smaller.

There are two persistent myths about Mozart. The first is that of "the child who never grew up." This was the view of Mozart's father and sister, who disapproved of much of what Mozart did after he, in effect, ran away from home at the age of 24. Perhaps the quickest way of debunking this myth would be to point out that, in those days before copyright laws, performing rights organizations, managers, publicists, personal assistants, phones, faxes, and modems, Mozart maintained a versatile freelance career, managing the demanding business of manuscript copies, publications, travel, lodgings, introductions, patronage, commissions, rehearsals, instruments, personnel, and concert venues out of his hip pocket, so to speak, while at the same time teaching a number of piano and composition pupils and enjoying a lively social life.

A somewhat different refutation of "the child who never grew up" myth is to be found in the following equation: $A = K/25 + 10$ (for $K \geq 100$). Here, "K" is the number assigned to each of Mozart's works in the chronologic catalogue promulgated by Ludwig Köchel (34), and "A" is Mozart's age at the time the work in question was composed. The graph of this equation is a straight line. This means that beginning with the Cassation in D major, K. 100, when Mozart was 14, his productivity was astonishingly steady, even when he was not under his father's stern supervision. And incidentally, this also means that, if you remember Mozart's year of birth, 1756, you can convert most Köchel numbers into the year of composition.

The second myth is the Amadeus myth, which implies that Mozart was a conduit for heavenly music dictated to him by God. This myth, which pervades not only musical literature but also writings in the fields of philosophy, esthetics, and psychology, originated in a notorious forgery of 1815—a spurious letter in which pseudo-"Mozart" is made to assert that he composed in a dreamy state in

which, "... the whole [composition], although it be long, stands almost finished and complete in my mind, so that I can survey it, like a fine picture or a beautiful statue, at a glance. Nor do I hear in my imagination the parts successively, but I hear them, as it were, all at once. . . . [T]he committing to paper is done quickly enough, for every thing is, as I said before, already finished; and it rarely differs on paper, from what it was in my imagination" (32,35).

One need only read the genuine letters of Mozart to his father while composing the opera *Idomeneo* in 1780 or the operetta *Die Entführung* in 1782 to appreciate how far off the mark the above forgery was. Nonetheless, Goethe, Pushkin, and Heidegger are only the best-known in a long list of writers taken in by this forgery. Recall, too, the scene in Peter Schaffer's Pushkin-based play and movie *Amadeus*, in which the dying Mozart struggles to complete the *Requiem* in the (improbable) presence of Salieri, who concludes that Mozart is an idiot savant. And among recent authors, both Sir Roger Penrose in his best-selling *The Emperor's New Mind: Concerning Computers, Minds, and the Laws of Physics* (1989) and Edward Rothstein in his *Emblems of Mind: The Inner Life of Music and Mathematics* (1995) have based important points upon the false letter of 1815.

The *Amadeus* myth is convincingly refuted through a systematic study of Mozart's sketches, drafts, abandoned fair copies, and the many completed works that exist in two or more authentic versions. Such refutation is reinforced by Mozart's own pronouncements on the matter, in which he stated that he required time free from disturbance and the presence of a keyboard instrument in order to compose, an activity that he twice described as "difficult labor." Taken together, all of Mozart's sketches, drafts, abandoned fair copies, alternate versions, and his own statements suggest a state of affairs in sharp contrast to the dreamy activities of the forged letter.

Reports published in several European cities after Mozart died attributed his death variously to violence, poisoning, venereal disease, and "dropsy of the heart" (congestive heart failure?). Many other diagnoses followed. None has emerged as definitive, no doubt because of the limitations of the historical documents upon which they are based. There are six such documents: entries in church registers of the death and the burial; the widow Constanze's remarks 5 or 6 years later to the Czech biographer, Franz Niemetschek, and three letters penned more than 30 years after Mozart's death (28-30,32,33).

The entry in the church register of deaths, written the day of Mozart's death, and the entry in the register of funerals and burials, written the next day—the day of his burial—both attribute his death to "severe miliary fever" (*hitziges Frieselfieber*) These are the only purely objective documents available, and all they tell us is that Mozart had a febrile condition accompanied by an eruptive rash.

(Whereas nowadays "miliary" is used primarily in conjunction with advanced tuberculosis, 2 centuries ago it was applied to a wide assortment of rashes.)

Five or 6 years after Mozart's death, his wife, Constanze (who was reportedly hysterical at the time of her husband's death and had to be sedated), was concerned primarily with perpetuating the lie that Mozart himself had completed his *Requiem*. She claimed that "the doctors did not agree on the cause of [Mozart's] death."

From 3 decades later, we have a pair of letters by a physician, Eduard Guldener von Lobes, a municipal health officer in Vienna at the time of Mozart's death, who claimed to have been informed about the matter by the two attending physicians, Thomas Franz Closset and Matthia von Sallaba. His letters constitute a partisan defense of his deceased colleagues' care of Mozart, along with a rather edgy justification of the practice of medicine in Vienna circa 1791. According to von Lobes, Mozart fell victim to an epidemic of "rheumatic and inflammatory fever," dying of "a deposit on the brain." Dr. von Lobes was a stubborn defender of the practice of therapeutic bleeding (venisection, phlebotomy), which doubtless contributed to Mozart's death.

The final document, also from 3 decades after the event, is a charmingly detailed narrative by Mozart's sister-in-law, Sophie Haibel. Unlike the previous writer, Sophie Haibel had been an eyewitness to Mozart's final illness and death. Her account, which vividly describes his swollen body, has the style and content of a Romantic novel, with Constanze Mozart and her sister, Sophie, cast as the heroines.

A vast literature in several languages has grown up around the subject of Mozart's death, which has attracted almost as many paranoid conspiracy theorists as have the deaths of JFK or Martin Luther King, Jr. Blame has been cast on Mozart's supposedly dissolute life-style, on his wife, on his doctors, on the composer Antonio Salieri, on the Masons, and on the Jews. Persons who barely knew Mozart claimed to have been eyewitnesses. Forged documents have been accepted as genuine, providing the bases for ever more absurd post mortems. In such a context, which might itself be described as febrile, the rational account and lucid interpretations of Mozart's health history printed above are refreshing. Unless someone discovers previously unknown, genuine historical documents, we have perhaps gotten as close to the truth of the matter as likely will ever be possible.

COMMENT

Philip A. Mackowiak, MD: In a letter to his father, June 20, 1781, Mozart opined that "... it is the heart that en-

nobles man." Dr. Fitzgerald has suggested that his own heart failed because of acute rheumatic fever. If she is correct, could his physicians have done anything more (less?) to have saved him? How would he have been treated differently, and to what effect, today? And what more might Mozart have accomplished had he recovered from this last serious illness?

Mozart's treatment was largely supportive. However, in the final phase of his illness, he was bled in the hope of reversing his inexorable decline. At best, phlebotomy was ineffective, and at worst an intervention that hastened death. He might have received salicylates (in the form of extracts of willow bark), as their salutary effect on inflammatory disorders was known as early as the Sumerian period (36). Moreover, scientific proof of the anti-inflammatory property of salicylates entered the medical literature nearly 30 years before Mozart's death (37). Unfortunately, the special capacity of salicylates to reverse the uncontrolled inflammation of acute rheumatic fever was not appreciated until much later.

Had Mozart been attended by modern day physicians, salicylates, in the form of high-dose aspirin, would have been his primary treatment (38). If aspirin produced intolerable gastric irritation, symptoms of salicylism, or failed to control the inflammatory process, corticosteroids would have been administered. Such therapy has proved highly effective in alleviating acute rheumatic carditis. However, neither salicylates nor corticosteroids prevents or modifies the development of chronic rheumatic heart disease (38).

If Mozart had survived his fatal episode of "acute miliary fever," it is impossible to know how much longer he might have lived or the extent to which he might have been incapacitated by sequellae of the acute disorder. If his anasarca was the result of rheumatic carditis, he would almost certainly have had persistent signs and symptoms of congestive cardiomyopathy. Whether these would have been severe enough to have brought to an end the astonishingly steady productivity of his earlier years is one of the many mysteries that will continue to haunt those who struggle to understand why one of the greatest tragedies in the history of music had to occur.

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