

Medical Problems of Composers

Robert H. Kurth, M.D.

Composers' medical problems seem to intrigue both musicians and physicians. Recent interest has sparked a series of articles in medical journals and music publications on this subject. New ways of looking at composers' illnesses from a more objective and scientific perspective have provided new insight into these illnesses. Many previous diagnoses of composers' illnesses—and particularly final illnesses—have been discarded and often replaced by more accurate diagnoses based on new medical knowledge. New relationships of anatomical abnormalities to certain medical syndromes have been proposed. The connection between illness and creativity and the behavior and psychiatric problems of composers have been reevaluated. Medical sleuthing has created a whole new field of fascinating medical literature.

A recent review of the premature deaths of composers was based on material from standard biographies of composers.¹ The following review, however, emphasizes selections from recent medical literature.

Not all composers had recurrent serious illnesses or premature deaths. Many great composers enjoyed relatively good health during their lives: Bach, Handel, Haydn, Rossini, Liszt, Wagner, Verdi, Grieg, Rimsky-Korsakov, Sibelius, and Richard Strauss. However, even the medical histories of these composers are interesting and revealing. An example is the medical history of **Franz Liszt**. Liszt, who died at 74, did not have serious health problems until his later years, and illness affected his life less than it did many of the other great composers. Although Liszt died of pneumonia, the underlying illness was chronic lung disease induced by cigarette smoking. Other disabilities suffered by Liszt were poor vision due to cataracts, osteoarthritis of the hands which impaired his piano playing, as well as arthritic involvement of the hip which caused him to limp.

Anatomical Variations and Abnormalities

Although caricatured as a tall, gangling, freakish figure, **Nicolo Paganini** was of average height.³ No additional features to suggest abnormal stature or proportions were evident in the portrait of Paganini by Delacroix, probably the most accurate likeness of him. The remarkable joint hyperextensibility of his shoulders, wrists, and especially left hand contributed to his ability to perform great feats on the violin. He was able to cross his elbows practically on top of each other due to the extensibility of the capsular ligaments of his shoulders. He could bend his thumb back

so far its nail touched the back of his hand, and he could move the joints laterally as well. The most likely disorder of connective tissue that would account for joint hyperextensibility with normal habitus and the absence of arachnodactyly is the Ehlers-Danlos syndrome.

Sergei Rachmaninoff,⁴ like Paganini, had unusual hands but, by contrast, Rachmaninoff's hands were large with long fingers or arachnodactyly. This extraordinary size and extensibility of Rachmaninoff's hands seem to indicate Marfan's syndrome. His photograph suggests he had long extremities, although while sitting down, he was no taller than the men he towered over when standing up. He also had other features characteristic of Marfan's: a narrow head with a long thin nose, prominent ears set at an angle, and a lack of subcutaneous fat. Myopia due to increased axial length of the eye, often severe, is common with Marfan's. Rachmaninoff's chronic visual problems and headaches were possibly due to difficulties of accommodation and convergence resulting from myopia. He also suffered disabling back pain, stiffness of the hands, and arthritic symptoms. Finally, a strange bruising of his fingertips suggests a microvascular fragility, also possibly arising from Marfan's syndrome.

One of the more esoteric endeavors of medical sleuthing is the pursuit of the "Mozart ear."⁵ From the studies of **Mozart** portraits it is evident that Mozart had unusual ears: round rather than oval with no earlobes. Recent surveys of hospitalized patients indicate a general prevalence of less than 1 in 1000 of this type of ear. That this condition could be hereditary is suggested in von Nissen's biography of Mozart by the following: an illustration of the composer's ear is shown with a short comment that Mozart's youngest son Franz Xavier had a similar appearing ear. The question then arises as to whether there is any significant relationship between Mozart's ear and his terminal illness.⁶ Malformations of the ear as signs of malformation of genitourinary tract have been described. This association occurs more frequently than by chance. Therefore, a previously unmentioned alternate hypothesis as to the cause of Mozart's renal disease is congenital anomalies of the urinary tract.

Hearing Problems

Hearing loss with tinnitus was not only an early symptom of **Smetana's** illness but also a component of a later neurological disease or psychosis which claimed his life. The most notorious hearing loss in a composer of course is **Beethoven**, and its relation to his creative life is well-known. Controversy remains as to the nature of his hearing loss. Previously, it was thought to be due to otosclerosis. Overwhelming evidence in recent years has pointed to osteitis deformans or Paget's disease,^{7,8} which can cause complete

Address correspondence to Dr. Robert H. Kurth, Mission Medical Group, 5555 W. 58th Street, Mission, KS 66202.

hearing loss. Beethoven's frontal eminences had become more and more conspicuous during his lifetime. Therefore, he had to push his hat more and more backward on his head. The postmortem findings of the congested, thickened, and hypervascular cranial bones support the diagnosis of Paget's disease.

Visual Problems

Blindness in a composer would in most cases put an end to composing. The notable exception is **Frederick Delius**, whose blindness was most likely related to central nervous system syphilis. The extension of his composing skills was due to the efforts of his amanuensis, Erik Fenby.⁹ The Delius-Fenby legacy allowed the fruition of Delius's genius, which otherwise might not have been fulfilled.

The only medical problem of **Johann Sebastian Bach** to be documented is his eye trouble.¹⁰ From his sixties or earlier, his vision was impaired by cataracts, and he chose an itinerant oculist for treatment. Cataract surgery in Bach's day was called "couching," a method that had existed for 1,000 years. It consisted of jabbing a special needle into the eye, probing until the lens was found, and then pushing it downward into the vitreous jelly inside the eyeball—all done without anesthesia. A repeat operation by the same oculist again resulted in failure, and Bach remained blind until he suffered a stroke and died ten days later. **George Frederick Handel** also suffered visual loss from cataracts and was operated on three times, lastly by the same oculist who performed the surgery on Bach.¹¹ As in Bach's case, surgery was unsuccessful.



BEETHOVEN AT THE POINT OF DEATH
From drawings by Teltscher before he was driven from the death chamber by Stephan von Breuning, Beethoven's boyhood friend.



BEETHOVEN

Two pen sketches of Beethoven, about seven years before his death, by Boehm

Cardiovascular Disease

Cardiovascular disease, especially coronary (or ischemic) heart disease, is the overall leading cause of death in the Western world today. In the past this was not the case for a variety of reasons: a relatively short life span, the high fatality rate of infectious diseases, and deaths from conditions that today are treated successfully by surgery. Historical diagnoses of coronary heart disease as well as heart disease in general are apt to be faulty because of the confusion of reported symptoms as well as erroneous ideas of pathologic processes. The scientific advancement of accurate diagnosis is an ongoing process, so that some historical perspective is necessary in evaluating earlier diagnoses.

Attacks of chest pain dependent on relative myocardial ischemia was an idea first proposed by Parry in 1799. However, the classical description of angina pectoris is credited to Heberden in 1802. It should also be remembered that coronary thrombosis was not recognized as a clinical entity until its classical description by Herrick as recently as 1922. Electrocardiography, elaborated by Einthoven and used extensively by Lewis, was not placed on a scientific basis until the 1930s by Wilson and his colleagues.

Ischemic heart disease is thought to have caused the deaths of several well-known composers. **Alexander Borodin** died suddenly in 1887 at the age of 44. Since it is known that 80% of all sudden deaths are due to coronary atherosclerosis, the diagnosis of sudden death from coronary heart disease is reasonable. **Antonin Dvorak** was thought to have sustained one or more myocardial infarcts before his death in 1904. **Carl Nielsen** was no longer able to compose after reportedly having had a myocardial infarction in 1926. **Shostakovich** had a chronic heart condition, presumably coronary heart disease, from which he died in 1975. However, the details of his illness were never published.¹²

Although both **Georges Bizet** and **Benjamin Britten** had valvular heart disease, perhaps most interesting medically is the illness of **Gustav Mahler**.¹³ In 1907, when Mahler was 47, he was examined by his local general practitioner, who detected valvular heart disease. In February 1911, Dr. Emanuel Libman was called in consultation and bacteriologically confirmed the diagnosis of subacute bacterial endocarditis. Libman was well aware of the hopeless outlook and informed Mahler of the prognosis. Mahler died in 1911 of terminal complications of bacterial endocarditis. The detailed story of Mahler's illness as well as his treatment by the famous Dr. Emanuel Libman, who so greatly contributed to the understanding of endocarditis, makes it a classic in the literature of medicine and music.

When one considers the relative infrequency of bacterial endocarditis (1% of heart disease), it is all the more remarkable that another great composer died of the same illness.¹⁴ As a child **Ottorino Respighi** suffered from rheumatic fever, which left him with a heart murmur. In early 1936 he developed a persistent fever. A blood culture revealed *Streptococcus viridans*, which was confirmed on several other occasions. This final illness of Respighi lasted about three months and, despite a trial of the recently discovered sulfonamides, he died in Rome on April 18, 1936.

Respiratory Disease

Pneumonia was frequently fatal in pre-antibiotic times regardless of a person's age. Bacterial pneumonia, often superimposed on chronic lung disease or as a terminal event of other diseases, was not an infrequent occurrence in the past as well as today.²

Pulmonary tuberculosis is currently a very treatable disease and is more often detected in the older population. In contrast, the disease in the past frequently occurred in youth and was a common cause of death. Therefore, it is not surprising that a number of composers were victims of this disease. The most celebrated case was that of **Frederic Chopin**, who died at age 39 as a respiratory cripple with recurrent hemoptysis. Others affected by the disease included **Carl Maria von Weber**, **Vincenzo Bellini**, **Giovanni Pergolesi**, **Karol Szymanowski**, and **Vasily Kalinnikov**. In the case of Kalinnikov, the diagnosis was made when he was 27. He suffered weakness, persistent cough, and persistent

hemorrhage for the remaining six years of his life, during which he composed all of his major works.

Two of the greatest composers of the 20th century, **Arnold Schoenberg** and **Alban Berg**, teacher and pupil, were not only leading members of the "second Vienna School" but also both suffered the same illness.

Arnold Schoenberg developed asthma in 1915 while a member of the reserve army. Because of deteriorating health, was released from military service within a year. Ten years later he obtained the chair of composition at the Prussian Academy and moved from Vienna to Berlin. Although his working conditions were better, his asthma grew worse so that, because of his health, he spent the winter of 1931-1932 in Barcelona. As a result of the anti-Semitic policies of the Third Reich, he left Berlin and after a brief sojourn in France accepted a position in Boston. Again asthma became a serious problem during the winter, and he moved to California.

Alban Berg was also born in Vienna, in 1885, 20 years later than Schoenberg. He did not suffer his first serious attack of asthma until after his marriage in 1911 but remained an asthmatic for the rest of his life. Because of major medical problems, the asthma as well as recurring abscess formation, he never appeared on the podium as a conductor or soloist. It was stated that his illness determined the characteristics of his artistic life.

Gastrointestinal Disease

That potentially serious diseases of the stomach and intestines were widely prevalent in premodern times comes as no surprise. Considering the lack of sanitation, the ignorance of the infectious nature of many illnesses, and the ineffective treatments that were applied, the frequency and often serious consequences of these illnesses are legion in 18th and 19th century biographies. Likewise, retrospective diagnosis is at best speculative in most situations because of the premortem lack of laboratory confirmation of these



FREDERIC CHOPIN

diseases and by the absence of postmortem pathologic tissue diagnosis before the time of Rudolf Virchow (1821-1902).

Perhaps the prime example of this enigma is the terminal illness of **Franz Schubert**,¹⁶ about which there was confusion as to the diagnostic label as well as the actual illness. German sources use the ambiguous term "typhus," and this term was uncritically used in a dozen works in English, including Grove's Dictionary. "Typhus" implies a louse-borne plague that in Schubert's case has no basis in fact. Subsequently an appeal was made for the "correct translation" of "typhus" to "typhoid," a disease altogether different. But now a second problem arises: whether the known facts about Schubert's final illness would point to the diagnosis of typhoid. Ongoing investigation has shown that much of the accepted account of Schubert's last illness seems to be without foundation in fact. Most evidence suggests that his illness was a continuation of an existing condition and not a new or unforeseen development. Because of the lack of clues that would point to a specific illness, one may speculate that the combination of the effects of obesity, alcoholism, and finally malnutrition were factors in his illness and death. However, a single, specific diagnosis of his terminal illness is unlikely to be made.

Other famous composers had better documented gastrointestinal illnesses. **Gustav Holst** suffered for years from duodenal ulcers and died as a result of a gastrointestinal hemorrhage. **Paul Hindemith** died of acute pancreatitis. **Johannes Brahms** is reported to have died of liver cancer. The postmortem examination of Ludwig van Beethoven indicated he had cirrhosis. **Claude Debussy** had rectal carcinoma. **Hector Berlioz** had severe, persistent abdominal pain and died in agony; the cause of which was never determined.

Infectious Diseases

Infectious diseases associated with a single organ or organ system have already been previously noted. The two major



FRANZ SCHUBERT

multi-system infectious diseases in the past were tuberculosis (already discussed) and syphilis.

Many prominent persons in the last century had syphilis, including a number of composers: **Hugo Wolf**, **Frederick Delius**, and **Gaetano Donizetti**. Evidence that Franz Schubert had secondary syphilis (in addition to the other medical problems already noted) is particularly well-documented in the article by Eric Sams.¹⁶ The year of 1823 was a hiatus in Schubert's creative life and a year of recurrent illness. No one knows for sure when Schubert was first taken ill, or precisely why, when, where, or for how long he was hospitalized. There are at least some factual grounds for a tentative diagnostic hypothesis of primary syphilis in early 1823. By his own words he had been housebound for some time by the end of February. In July, while Schubert was on a holiday in the country, he related that he was "seriously ill" and was said to have hidden himself because of this. In November, back in Vienna, he was bedfast with two doctors in attendance.

Two lines of evidence imply secondary syphilis in Schubert's illness. The first is the repeated observations by a number of friends of his physical appearance, as well as his own recorded complaints. The second is the type of treatment he received. The observation of a rash and alopecia was recorded by several of his friends. Schubert himself was said to have complained of frequent headaches and pains in his bones. His treatment included regimens frequently prescribed for intractable types of infections such as syphilis, including repeated applications of a mercury ointment. Whatever its cause, the chronic course continued its fluctuating cycle—a pattern typical of syphilis—and it was not until November 1824 that Schubert was said to be "newly rejuvenated." A current textbook of medicine lists the manifestations of secondary syphilis:¹⁷

1. Cutaneous eruption occurring in at least 80 percent of patients and characteristically a generalized papular rash that is quite marked on the palms and soles
2. Patchy alopecia of the beard of the scalp due to lesions around the hair follicles
3. Periostitis with widespread lytic lesions of bone (giving rise to deep bone pain)
4. Iritis or anterior uveitis (producing chronic recurrent headaches)

Other manifestations include malaise, fever, sore throat, generalized lymphadenopathy, oral lesions of mucous membranes including the so-called mucous patch, hepatitis, and symptomatic gastritis. That his physicians would be aware of these symptoms as manifestations of syphilis seems likely since the disease was common during Schubert's time.

Renal Disease

One of the best reported illnesses of a composer that employs retrospective analysis is Peter J. Davies' article on Mozart's illness and death.¹⁸ None of Mozart's medical records has survived to the present day, and an autopsy was not performed. All of the accounts of the symptoms of

Mozart's illnesses were provided by laymen and were inconsistent. Therefore, it follows that there has been no agreement as to the cause of his death, and it is inevitable that doubts persist. Davies began his inquiry by listing all of Mozart's reported illnesses followed by an analysis of these illnesses and an evaluation of Mozart's final illness, compiling a list of possible diagnoses that would account for the known facts. He offered eleven hypotheses as to the cause of Mozart's death and examined the validity of each. Davies concluded that Schonlein-Henoch purpura "solves the mystery and ties up the loose ends." He summarized Mozart's major illness as follows:

"Throughout his life Mozart suffered frequent attacks of tonsillitis. In 1784 he developed post-streptococcal Schonlein syndrome which caused chronic glomerular nephritis and chronic renal failure. His fatal illness was due to Schonlein-Henoch purpura, with death from cerebral hemorrhage and broncho-pneumonia. Venesection(s) may have contributed to his death."

However, the controversy as to the cause(s) of Mozart's death has not ended. One report hypothesized that Mozart may have died as a complication of juvenile rheumatoid arthritis (Still's disease) and amyloidosis or of a related disorder, Bechet's syndrome.¹⁹ Another speculation concerned the contribution of "mycotoxins,"²⁰ and finally, the view that Mozart was poisoned keeps surfacing.

Character Disorders—Neuroses and Psychoses

"Character disorders" include a somewhat controversial array of conditions which nevertheless are rather fascinating. A number of composers may fit this diagnostic category. **Richard Wagner's** dealings with others might well justify the diagnosis of sociopathic behavior. The alcoholism of **Modest Mussorgsky** may also be included, although the modern view considers alcoholism as a disease. The lack of purpose in the life of **Ján Ladislav Dussek**, pianist-composer and close friend of Beethoven, seems indicative of depression.²¹ "His manner of death is a warning. He took too little exercise, became stout, found motion tiresome, spent his days in bed, felt bored, drank, and died."

Sexual deviation may also be included in this category, the most unusual case being that of **Frantisek Koczwara**, composer of "The Battle of Prague."²² This composition, a piece of battle music of the same genre as Beethoven's "Wellington's Victory" and Tchaikovsky's "1812 Overture," was a popular favorite from about 1790 to 1820. Koczwara, however, gained particular notoriety by the manner of his death. The story is related in an anonymously written pamphlet that a bookseller might describe as "curiosa." The last part deals with the trial of Susannah Hill, who assisted Koczwara in the fatal event. While in London the composer had visited her during the early morning hours. Susannah, whose living depended "upon the events of the evening," received him into a "back room" where "several acts of the grossest indecency passed." He then said he should like to be hanged for five minutes. After he hanged five minutes, she cut him down, and he fell to the

ground and was subsequently pronounced dead. The prosecution had charged Susannah Hill with manslaughter on the grounds that she had assisted Koczwara to commit suicide. Sexual hanging, better labeled autoerotic asphyxia when it proves fatal, is predicated on the belief that compression of the carotid arteries and jugular veins produces cerebral hypoxia and hypercapnia, which elicit sexual excitement. Individuals who come to medicolegal attention as a result of autoerotic asphyxia are the victims of a psychosexual disorder. The term "Koczwaraism" has been proposed to describe these cases.

Schizophrenia, a type of psychosis, does not constitute an absolute impediment to artistic expression in painters. In fact, some paintings by schizophrenics have a special fascination and attraction, and some schizophrenic painters have become famous. Identified schizophrenic composers, however, seem to be rare. There had been only one well-documented case of schizophrenia, namely the English poet and songwriter Ivor Gurney (1896-1937), until recently when a catatonic Swedish composer was identified.²³ His name was **Jakob Adolf Hägg** (1850-1928). At age 14 he was sent to Stockholm to enroll in the Conservatory where he was a prolific composer (140 printed and 300 unprinted works). These compositions are characterized by energy, clarity, and elegance. His first breakdown occurred at 23 years of age in Berlin. Three years later, in 1876, he was admitted to a mental hospital in Stockholm, due to religious delusions and suicidal thoughts. After his release from the hospital he married but finished only a few compositions during these years. His second hospitalization lasted from 1880-1895. After his release he remained symptomatic and mainly rearranged the music of his earlier years. Today there is a renewed interest in Hägg, and some of his music has been recently recorded.

There has been, at least historically, some controversy concerning the major affective disorders (which include unipolar and bipolar types of depression) and their relation to creativity. Frosch²⁴ points out that the Enlightenment view of genius was of balance. For example, Voltaire saw genius as imagination in conjunction with memory and judgment; Kant viewed it as a favorable proportion of sensibility, judgment, creative spirit, and taste; to Moses Mendelssohn, genius was a state of perfection of all mental powers working in harmony. With the shift to Romanticism, the goal was originality, and artists began to link their genius to madness and permitted their eccentricities to blossom. In 1836 Lelut, a French physician-psychiatrist, asserted that Socrates had a "most undeniable form of madness" and thus began the so-called scientific support for the idea of genius as illness. Frosch's conclusion concerning the possible relation of major affective disease and musical creativity was: "not proven."

Recent interest in the relationships of composers and mental disorders has been stimulated in part by the book on **Robert Schumann** by psychiatrist-musician Peter Ostwald.²⁵ Ostwald states that "the most comprehensive diagnosis for Schumann's psychiatric illness would be a ma-

major affective disorder" and that Schumann's "mood swings in the opposite direction, toward mania, makes this a 'bipolar' type of affective disorder."

Because depression (unipolar type of affective disorder) is a common diagnosis, it is not unusual that a number of composers have experienced this illness with greater or lesser severity. **Rimsky-Korsakov** in his biography (a classic of its type) relates:²⁶

"... that towards the end of winter I had developed a feeling of fatigue, I may say even of indifference and almost aversion to this work. This frame of mind manifested itself for the first time then, but subsequently it would recur invariably towards the end of my major works. It made its appearance suddenly somehow: the work of composition would run on as it should, with complete enthusiasm and concentration; then, suddenly, weariness and indifference would creep on from apparently nowhere. After a lapse of time this sickening mood would pass of its own accord and I would again resume work with all my former zeal."

Organic Brain Disease

Several composers died as a result of some intracranial problems, most notably George Gershwin's brain tumor. However, one of the more interesting reports of diagnosis by retrospective analysis was that of Delessio about the illness of **Maurice Ravel**.²⁷ The story of Ravel's later adult life is of particular interest since the rapid decline in his intellectual powers occurred during his most productive years. At the age of 56 in 1931 he completed his two major concertos for the piano, both of which enjoyed immediate and great critical acclaim. However, a few months later he developed a number of complaints, and his creative energy remained dormant. By 1932 his mental powers began to erode noticeably. His capacity to remember names, to speak spontaneously, and to write became impaired. These disabilities progressed rapidly during the next year, and he began to experience amusia or inability to produce or comprehend musical sounds. Speech and intellectual functions declined further, and after 1936 he was more or less mute and incapable of recognizing his own music. He died at the age of 62 with the immediate cause of death the result of a neurosurgical misadventure (the indications for the surgery were far from clear). There was no serologic evidence of syphilis nor had he experienced the acute signs or symptoms that characterize cerebrovascular diseases. Given the history as outlined, one may presume that Ravel had Alzheimer's disease.

Injuries and Traumatic Deaths

Enrique Granados happened to be on the SS *Sussex* when it was torpedoed and sunk by a German submarine in the English Channel during World War I. **Anton Webern** was shot mistakenly by an American soldier in Vienna in 1945 when he failed to respond with the required password. **Ernest Chausson** in 1889, while bicycling, a form of exercise to which he was passionately addicted, somehow lost control of his machine and smashed into a wall. He was killed instantly.

Schumann's hand injury is one of special interest. **Henson and Urish**²⁸ indicated that the nature of the injury was neurologically determined but stated early in their discussion that "neurological complaints in historical figures before the introduction of systemic clinical examination and diagnostic laboratory investigations is commonly unsatisfactory." They discuss the pros and cons of a diagnosis of posterior interosseous nerve compression about the supinator muscle. However, whether Schumann suffered a nerve compression, "overuse syndrome," or "motor control disorder" remains conjectural.

That illness may on occasion have a positive effect on composition should be noted. Schumann's hand injury resulted in his decision to be a composer rather than a professional pianist. Most of the time the beneficial effect of the illness on composition would be questionable, such as the exhilarative effect of toxicity during the final stage of tuberculosis (Chopin?) or the rush to complete compositions when threatened by death (Mozart, Mahler, Bartok?). In at least one instance of a positive contribution of illness, the slow movement of Beethoven's late string quartet, Op. 132, carried this caption in the composer's own hand: "Song of Thanksgiving to the Deity, on recovering from an illness—in the Lydian mode."

Conclusion

Illnesses of composers continue to interest physicians, musicians, and musical historians. How illnesses of composers have affected creativity and what masterpieces were never realized because of illness or premature death are a matter for speculation. Present interest in the exploration of these topics is evident in the increasing literature of illnesses of composers. Fortunately, much of this literature is becoming more factual and scientific.



ROBERT SCHUMANN

References

1. Green ST, Green FAM: The great composers: their premature deaths. *J Roy Coll Phys Lond* 21:202-205, 1987.
2. O'Shea JG: A medical history of Franz Liszt. *Med J Austral* 145:625-630, 1986.
3. Smith RD: Paganini's hand. *Arthritis Rheum* 25:1385-1386, 1982.
4. Young DAB: Rachmaninov and Marfan's syndrome. *Br Med J* 293:1624-1626, 1986.
5. Paton A, Pahor AL, Graham GR: Looking for Mozart ears. *Br Med J* 293:1622-1624, 1986.
6. Karhausen L: Mozart ear and Mozart death [letter]. *Br Med J* 294:511-512, 1987.
7. Naiken VS: Paganini's disease and Beethoven's deafness. *Clin Orthop* 89:103-105, 1972.
8. Landsberger M: Beethoven's medical history. *NY State J Med* 78:676-679, 1978.
9. Fenby E: Delius as I knew him. Cambridge, Cambridge University Press, 1936, 1981.
10. Kupferberg H: Couching Bach's cataracts. *MD* 49:53, 1985.
11. Keynes M: Handel's illnesses. *Lancet* 2:1354-1355, 1980.
12. Roseberry E: Shostakovich: His Life and Times. New York, Midas Books/Hippocrene Books, Inc., 1981, p. 179.
13. Levy D: Gustav Mahler and Emanuel Libman: bacterial endocarditis. *Br Med J* 293:1628-1631, 1986.
14. Reschini E, Calania A: Ottorino Respighi: bacterial endocarditis in 1936 [letter]. *Br Med J* 294:775, 1987.
15. Falliers CJ: Arnold Schoenberg and Alban Berg the serial music and serious asthma of two leading 20th century composers. *J Asthma* 23:211-217, 1986.
16. Sams E: Schubert's illness re-examined. *Musical Times* 121:15-22, 1980.
17. Cecil Textbook of Medicine, 17th ed. Philadelphia, W.B. Saunders Co., 1985, pp. 1653, 1654.
18. Davies PJ: Mozart's illnesses and death. *J Roy Soc Med* 76:776-785, 1983.
19. *Medical World News*. July 8, 1985, p. 93.
20. Schoental R: Mozart's illness and death [letter]. *J Roy Soc Med* 76:1079-1080, 1983.
21. *Oxford Companion to Music*, 10th ed. Oxford, Oxford University Press, 1970, p. 308.
22. Ober WB: The sticky end of Frantisek Koczwara composer of "The Battle of Prague." *Am J Forensic Med Pathol* 5:145-149, 1984.
23. Gunne LM: A schizophrenic composer—Jakob Adolf Hägg. *Acta Psychiatr Scand* 74:1-2, 1986.
24. Frosch WA: Moods, madness and music: Major affective disease and musical creativity. *Comprehensive Psychiatry* 28:315-322, 1987.
25. Ostwald P: Schumann: The Inner Voices of a Musical Genius. Boston, Northeastern University Press, 1985.
26. Rimsky-Korsakov NA: My Musical Life. Translated from the 5th revised Russian ed. by Jodah A. Joffe. New York, Vienna House, 1972, p 357.
27. Dalassio DJ: Maurice Ravel and Alzheimer's disease. *JAMA* 252:3412-3413, 1984.
28. Henson RA, Ulrich H: Schumann's hand injury. *Br Med J* 1:900-903, 1978.