Could a neurological disease be a part of Mozart's pathography?

Ivkić, Goran; Erdeljić, Viktorija

Coll. Antropol. **35** (2011) Suppl. 1: 169–173
Short communication

Could a Neurological Disease be a Part of Mozart's Pathography?

Goran Ivkić[1] and Viktorija Erdeljić[2]

[1] University of Zagreb, Croatian Institute for Brain Research, Department of Neurology, »Neuron« Diagnostic Center, Zagreb, Croatia
[2] University of Zagreb, University Hospital Zagreb, Division of Clinical pharmacology, Zagreb, Croatia

A B S T R A C T

As expected, since we recently celebrated the 250th anniversary of birth of Wolfgang Amadeus Mozart, there has been again a renewal of interest in his short but intensive life, as well as in the true reason of his untimely dead. Mozart lived and died in time when the medical knowledge was based mostly on subjective observations, without the established basics of standardized medical terminology and methodology. This leaves a great space for hypothesizing about his health problems, as well as about the cause of his death. The medical academic community attributed to Mozart approximately 150 different medical diagnoses. There is much speculation on the possible causes of Mozart's death: uremia, infection, rheumatic fever, trichinellosis, etc. Recently some authors have raised the question about a possible concomitant neurological disease. According to available records, Mozart has shown some elements of cyclotimic disorder, epilepsy and Gilles de la Tourette syndrome. Furthermore, the finding of a temporal fracture on (allegedly) Mozart's skull, gives a way to speculations about the possibility of a chronic subdural hematoma and its compressive effect on the temporal lobe. Despite numerous theories on Mozart's pathography that also include a concomitant neurological disorder, the medical and history records about Mozart's health status indicate that he probably had suffered from an infective illness, followed most likely by the reactivation of rheumatic fever, which was followed by strong immunologic reaction in the last days of his life. Taking all the above into consideration, it is reasonably to conclude that Mozart's neurological disturbances were caused by the intensity of the infective disease, and not primarily by a neurological disease.

Key words: *Wolfgang Amadeus Mozart, pathography, neurological illness, cause of death*

Introduction

»Raindrops on roses and whiskers on Kittens,
Bright copper kettles and warm woolen mittens,
Brown paper packages tied up with strings,
*This are few of my favourite things…«**

** Lirics from the song »My Favourite Things« from the R. Rodgers & O. Hammersteins movie »Sound of Music«*

When I listen to the lyrics from the song »My Favorite Things« from R. Rodgers & O. Hammerstein's movie »Sound of Music« I often think of Mozart. Is it because of Salzburg, where the happenings in the movie took place, because of the joy and happiness I associate with it, or maybe because Mozart's music is one of my favorite things?

As expected, since recently we celebrated the 250th anniversary of birth of the musical genius Wolfgang Amadeus Mozart, there is again a renewal of interest and an interdisciplinary search going on of his short but intensive life. Among the numerous research disciplines, one of the most active dealing with Mozart's life and death is medical pathography, which is trying to explain the mystery surrounding the cause of his early death. Led by curiosity and trying to find out as much as possible about his life, with emphasis on the last years of his life, I was surprised of how many different diagnoses were attributed to Mozart as a possible cause of his untimely dead[1–3]. Recently, I attended a lecture on Mozart's life where I was told that the medical academic community attributed to Mozart approximately 150 different

Received for publication October 29, 2009

medical diagnoses[2]?! Most of the proposed differential diagnoses are in the area of infectious diseases, internal diseases and a few neurological as well.

Therefore, the logical question is: was Mozart really so ill by the age of 35, or are Mozart's pathographs exaggerating when evaluating his health problems. Furthermore, what interested me the most as a neurologist was the possibility of explaining a part of his health problems by neurological disturbances.

In this article, we tried to evaluate as objectively as possible, the possibility of coexistence of neurological disturbances contributing to Mozart's health problems.

Methods

We evaluated available literature on Mozart's pathography through search of specific biographic publications, available Mozart's correspodence, through PubMed search using the following key-words: Wolfgang Amadeus Mozart, pathography, cause of death, as well as through personal communication with experts in this field (e. g. Univ. Prof. Dr. Anton Neumayr, Weimarer Straße 88, 1190 Wien, Austria, 12th January 2006.).

Discussion and Conclusion

Before any serious attempt to evaluate someone's pathography, there is a need to see the person of interest in the broader context, which means really understanding the time in which the person lived. Furthermore, it is important to take into consideration all biographic details about that person including the relationships with all individuals important for the story of someone's life[4–7]. The time and space context is often the most valuable tool for rational evaluation. Mozart lived and died in time when the medical knowledge was based mostly on subjective observations, without the basics of standardized medical terminology, and the lack of basic medical routine methods, like measuring of body temperature, auscultation and measuring of blood pressure[8]. This leaves a great space for hypothesizing about his health problems, as well as about the cause of his death.

Fig. 1. »Mozart's last days«, (oil on canvas). Hermann Kaulbach, 1872.

The main sources of today's medical conclusions about Mozart are the biographic records which include few medical reports written by Mozart's doctors[9,10], written correspondence of Mozart and his family members and friends[5].

Owing the fact that Mozart's body was never autopsied, and that his widow purchased a third-class funeral with dispersion of his remains 7 years later when his grave was reused, his remains are now lost to modern researchers. Without the main material subject, Mozart's' body, there is no truly important and relevant source of information about Mozart's illnesses and cause of death[10,11].

Although the Salzburg Mozarteum keeps a scull which is allegedly Mozart's, questions concerning its authenticity have elements of a crime story and would need a detective like Sherlock Holmes or Hercule Poirot for its resolution[12,13].

Which diseases plagued Mozart during his short life and what was the main cause of his death, are the questions that arise from 2 centuries of intrigue theories. Due to the fact that the course of his final illness was short (15 days), numerous hypotheses were made and proposed, sometimes maybe too easy and without taking all relevant aspects into consideration. Among these theories, a long time one of the most popular was the theory of conspiracy and poisoning also popularized through the work of other artists (Pushkin, Rimsky Korsakov, and Milosz Forman). The main character in conspiracy theories remained Mozart's rival Antonio Salieri[14–17].

There is much speculation on the cause of Mozart's death: uremia, infection, rheumatic fever, trichinelosis etc. However, we won't go much into details regarding the mentioned differential diagnoses since there are many publications dealing with them. The question remains, is there evidence of a concomitant neurological disease?

Neurological theories

Which facts in the historical records about Mozart led the neuroscientists to the conclusion about neurological deficits or signs? As in most questions related to Mozart, it is a field of many speculations. Due to the need of approaching carefully and critically to every differential diagnosis, in this article we tried to critically appraise available neurological hypotheses of Mozart's illness.

Epilepsy

The available chronics and medical records show that Mozart was inclined to frequent episodes of illness when exposed to extreme emotional and physical stress. This could be attributed to the type of his work and the way he was doing it, as well as to his childhood and his specific psychological profile.

According to some records, Mozart showed some elements of cyclotimic (manic-depressive) disorder, and he drove his body often to the edge of breakdown[18,19]. In more than one situation, Mozart had suffered from syn-

copes in duration of a few minutes, sometimes more, which was enough for some authors to conclude that Mozart probably suffered from some kind of epilepsy. Furthermore, the epilepsy theory is backed up by Mozart's allegedly hedonistic manners and alcoholism, which is in our opinion a *cliché* and simplification. The finding of the temporal fracture on (allegedly) Mozart's skull, gives a way to speculations about the possibility of a chronic subdural haemathoma and its compressive effect on the temporal lobe, which leads us back to epilepsy as a logical conclusion[20,21]. However, all available records concerning the mentioned scull are not supporting the theory that it is Mozarts[12,13].

A facial spasm described on Mozart's face just before he died could easily be incorporated into the clinical picture of a premortal grand epileptic attack that followed a partial Jackson's attack.

On the other hand, the general living conditions of this time, hygiene standards (or the lack of it) and Mozart's life style, could at least partially contribute to his bed health condition and occasional syncopes. The last moments of Mozart's life, accompanied by fever, generalized edema, vomiting and body spasms, are attributable to the last phase of an infective disease. The described symptoms found in medical and other records, do not point with certainty to epilepsy (there is no description of incontinence, bloody foam on his lips, tonic-clonic spasms of his body, etc). If Mozart had suffered from epilepsy it would probably had been described and pointed out by his physicians, because the symptoms of the »sacred disease« have been well known from the ancient times[22].

Gilles de la Tourette syndrome

Some biographic sources assert that Wolfgang Mozart frequently showed some interesting characteristics that could be attributed to neurological disturbances (tics), even to the syndrome »Gilles de la Tourette« (TS)[23,24]. This hypothesis is strengthened by the known relation between creativity and this syndrome. At the end of 1991, the Swedish author L. Gunne from University of Uppsala published an article in which he hypothesized that, taking into account Mozart's exceptional creativity, a number of compulsive actions and his inclination to obscenity, Mozart probably suffered from TS[25].

A year later, American endocrinologist B. Simkin published an essay in which he analyzed Mozart's correspondence where he claimed to have found elements of coprolalia, palylalia and echolalia (fragments of repeating words in his written texts and speech), which all are symptoms of TS[26]. However, Simkin concluded that these observations could also have another meaning, and are not a sure sign of TS, especially due to the fact that patients with TS probably could not have such a fluent writing as Mozart. All Simkin's reports encompassed and evaluated Mozart's later period of life; the period of his final illness which was characterized by nervousness, agitation, pain, muscular cramps and twitches, grimacing and tics. All this symptoms have a plausible explanation in the final stage of his illness, which was probably of infectious origin.

The ability to compose is a part of Mozart's musical genius. The music continuously kept arising in his mind; he was able to compose music even while talking to people or being involved in everyday activities. That kind of talent remained unique and unrepeated until today. Mozart simply played with notes and tones in his head, without the need of instrumental verification and documentation. He wrote down complete musical parts even weeks later, due to his amazing capability for selective archiving and remembering data for later and more convenient moments. Isn't it possible that he experimented with words in similar manner? Haven't we all tried to use anagrams and word games in the desire to make a more intense word impression?

The fact is that some authors too easily qualify occurrence of »indecent« and »dirty« words as coprolalia. Considering the low criteria for diagnosing coprolalia by some authors, a question arises in my mind of how many patients with TS have I failed to diagnose?!

If we take into consideration the specifics of the alpine part of Austria where Mozart grew up, where some so called »indecent« words are a part of everyday language and folklore, coprolalia is not a diagnosis which seems adequate.

Similarly, parallels could be drawn to my own language as well to other languages that keep a number of »indecent« words as a part of folklore.

Mozart's biographers often mention »great pain« that he suffered during a few episodes in his life: 1778. in Mannheim and Paris, and 1781 in Vienna[4,7]. There are no clear descriptions of the character and localization of the pain, or even if it was a physical or psychical kind of pain.

According to medical and other biographic records, the last 2–3 years of his life, Mozart health was degrading (1789–1791); he grew more nervous, he was plagued by melancholia and weakness of his body followed often by headaches, without available precise characterization of these symptoms[3,20,21,26]. During the mentioned period, despite his weakening health, Mozart was enormously creative, he worked constantly and exhausted his body, which could be the probable cause of syncopes he had suffered periodically.

Terminal stadium

Although there are many theories about the disease that led to the fatal outcome, all indicators are pointing to an existence of an acute infective illness[10,11]. The last two weeks of Mozart s life were characterized by fast progression of weakness, high fever, generalized edema, etc. There are numerous opinions and theories about the cause of Mozart' death; was it a renal disease and uremia, or the reactivation of rheumatic disease which was identified at that time as »hitziges Frieselfieber«, due to the occurrence of fever and rash. Diagnose of »hitziges Frieselfieber« was very often at that time, and etiologi-

cally meant than as much as it means now. Mozart's personal physician Thomas Franz Closset and his assistant Guldener von Lobes diagnosed Mozart's terminal illness as rheumatic fever[14].

The general approach to treatment at that time very often caused a rapid deterioration of patient's illness. Venesection was a popular treatment of febrile illnesses, as well as stimulation of body fluid loss due to induced diarrhea or perspiration. We can only imagine how these therapeutic procedures influenced already fragile Mozart's body, by inducing hypovolemia and shock, which could explain the loss of consciousness a few hours before death. Until his final hours Mozart's mind was intact and clear. The medical records of Eduard Guldener von Lobes favor the opinion about the involvement of the central nervous system, but not as a separate disease, but as a part of symptoms that could arise from brain deposits in rheumatic fever[14]. Mozart's son Carl Thomas, who was 7 years old at that time, remembers the swelling of his father's body, his unconscious state and fetor. The described condition of Mozart's body was probably the cause that his body was not autopsied by his physicians[28].

Mozart's physical status was rapidly worsening, and a few hours before he died he fell into a coma from which he never recovered. It has been written that in the moment of his death he cramped his body, turned his head to the wall and made some strange sounds. He died at 1 a.m. on 5th January 1791.

In conclusion, medical and history records about Mozart's health status indicate that he probably had suffered from an infective illness, followed most likely by the reactivation of rheumatic fever, which resulted in a strong immunologic reaction in the last days of his life. According to available evidence, it is reasonable to believe that central nervous system disturbances occurred due to the worsening of his basic illness, and not due to a concomitant neurological disease. The neurological disturbances Mozart suffered were most probably caused by the intensity of infective disease, as well as by implemented therapy.

Mozart's genius and his work deserve more consideration in the process of pathographic qualification, with more detailed and maybe even more benign evaluation, before labeling him as promiscuous, manic-depressive, imbalanced, syphilitic, etc.

Maybe the 250th anniversary of Mozart's birthday is a point where we could see Mozart more through the prism of the harmony, exaltation and esthetics of his magnificent music that he left us in heritage.

Taking all the above into consideration, it is reasonably to believe that one of *our favorite* composers was not primarily a neurological patient.

REFERENCES

1. DAVIES PJ, Mozart in Person: His Character and Health, Greenwood Press (Westport, Conn, 1989). — 2. DAVIES PJ, J R Soc Med, 84 (1991) 246. — 3. HIRSCHMANN J V, Archives of Internal Medicine, 161 (11) (2001) 1381. — 4. LEONHART D, Diogenes Verlag AG (Zürich, 1994). — 5. ANDERSON E, Macmillan (London, 1985). — 6. NIEMETSCHEK F X, Leonard Hyman (London, 1956). — 7. NISSEN GN, Georg Olms Verlag (Leipzig, Germany, 1828). — 8. THE VIENNA MEDICAL SCHOOL OF THE 19TH CENTURY, Johns Hopkins University Press (Baltimore, 1977). — 9. WERNER AJ, Seine Ärzte, seine Krankheiten, sein Tod. In: CSOBIDI P, (ed) Wofgang Amadeus Summ summarum; Das Phenomen Mozart: Leben, Werk, Wirkung, (Paul Neff Verlag, Wien, 1990). — 10. NEUMAYR A, J & V Edition (Wien, 1982). — 11. BÄR C, Internationalen Stiftung Mozarteum (Salzburg, 1972). — 12. PUECH PF, PUECH B, TICHY G, Forensic Sci Int, 41(1–2) (1989)101. — 13. KARHAUSEN LR, J Med Biogr, 9(2) (2001) 109. — 14. DEUTSCH OE. Mozart: A Documentary Biography, (Stanford, California, 1965). — 15. PUSHKIN A. Mozart and Salieri: The Little tragedies. (Angel Books, London, England, 1982). — 16. RIMSKY KORSAKOV N, Mozart and Salieri. An opera in two scenes, 1897. (Libretto adapted from A. Pushkin's "Mozart and Salieri" 1830). — 17. SHAFFER P. Amadeus (New American Library, NY, New York, 1984). — 18. KARHAUSEN LR. Mozart in person ŠLetterĆ, Times Lit Suppl, December (1990) 21. 19. SLATER E, MEYER A, Confinia Psychiat, 2 (1960) 129. — 20. PUECH B, PUECH PF, Injury, 20 (1989) 327. — 21. DRAKE ME JR, Neurology, 43(11) (1993) 2400. — 22. FATOVIĆ-FERENČIĆ S, DÜRRIGL MA, Epilepsy & Behav 2, (2001) 370. — 23. MATTENKLOT G, Blindgänger, Physiognomische Essais (Frankfurt am Main, Suhrkamp 1986) 169. — 24. KARHAUSEN LR, Perspect Biol Icd, 39 (1995) 152. — 25. L GUNNE, Lakartidningen, 11, 88(50) (1991) 4325. — 26. SIMKIN B, BMJ, 19 26;305(6868) (1992) 1563. — 27. BAUER WA, DEUTSCH OE, EIBL JH, (Eds) Mozart: Briefe und Aufzeichnungen: Gesamtausgabe, 7 vols (Barenreiter-Verlag, Kassel 1962) 75. — 28. BANKL H: Mozart und seine Brüder. Hintergründige Geschichten von der Freimaurerei, mit einem Freimaurer-Tagebuch Hans Bankls. (Seifert Verlag. 2009).

G. Ivkić

University of Zagreb, School of Medicine, Croatian Institute for Brain Research, »Neuron« Diagnostic Center, Department of Neurology, Šalata 12, 10000 Zagreb, Croatia
e-mail: givkic@hiim.hr

NEUROLOŠKI ASPEKT MOZARTOVE PATOGRAFIJE

S A Ž E T A K

Nedavno obilježavanje 250-te godišnjice rođenja Wolfganga Amadeusa Mozarta, ponovno je rasplamsalo zanimanje za njegov kratki, ali vrlo buran život, a posebno za moguće razloge njegove prerane smrti. Mozart je živio i umro u vremenu kada se medicinsko znanje temeljilo prije svega na subjektivnim zapažanjima, bez osnovne terminološke i medicinske standardizacije. To je ostavilo velik prostor za stvaranje brojnih hipoteza o njegovim zdravstvenim problemima, a jednako tako i o mogućim uzrocima njegove smrti. Medicinska je akademska zajednica Mozartu do sada pripisala oko 150 različitih medicinskih dijagnoza, s napomenom da to vjerojatno nije i konačan broj. Između brojnih nagađanja o mogućim uzrocima smrti kod Mozarta, izdvajaju se: uremija, infekcije, reumatska groznica, trihineloza, itd. Neki su autori nedavno postavili pitanje i o mogućem postojanju neuroloških bolesti kod Mozarta. Prema biografskim podacima kod Mozarta su osim glavobolja navodno zamjećeni i neki elementi ciklotimnog poremećaja, epilepsije i Gilles de la Tourette-ovog sindroma. Nadalje, nalaz frakture sljepoočne kosti na (navodno) Mozartovoj lubanji, stvorila je prostor za spekulacije o postojanju kroničnog subduralnog hematoma, koji je mogao stvarati kompresivni efekt na sljepoočni režanj. Unatoč brojnim teorijama u Mozartovoj patografiji (uključujući i gore navedene), većina medicinskih pokazatelja upućuje na infektivnu pozadinu Mozartove smrti, koja je najvjerojatnije bila posljedica reaktivacije reumatske groznice. Uzevši sve navedeno u obzir, realno je zaključiti da su Mozartovi neurološki poremećaji bili uzrokovani intenziviranjem infektivne bolesti, a ne primarno neurološke bolesti.