Frédéric Chopin and his suffering

Summary

Background. In 2010 we celebrated the bicentennial of Chopin’s birth. He left more than 230 fantastic compositions, often described as romantic, emotional and poetic. Chopin composed almost exclusively for piano solo and has been called the pianists’ composer. From his teens he suffered from respiratory tract infections, gradually accompanied by haemoptysis, pronounced breathing problems, diarrhoea and loss of weight. He experienced part of his adult life as a period of great suffering. He was 39 years old when he died. The assumed cause of death was tuberculosis, but other possible differential diagnoses have been suggested in recent years.

Material and method. In order to examine the different diagnostic alternatives, a non-systematic search of the literature was carried out in PubMed, Embase, Current Contents, Google and relevant reference books.

Results. The official cause of death was tuberculosis, but the autopsy report has never been found. Both cystic fibrosis and alpha-1-antitrypsin deficiency are possible differential diagnoses that can explain his symptoms.

Interpretation. In spite of a disabling disease, Chopin was musically creative right to the end of his life. His suffering must have influenced his musical expression, which is characterised by intimacy and sentimentality. It is unlikely that we will ever find the true cause of death.

Chopin is one of the most influential and popular composers of piano music of the 19th century. In Poland he is regarded as the person who has had most influence on the country’s history of music (3, 7). Chopin composed almost exclusively for piano solo and has been called the pianists’ composer. He was a brilliant pianist and his music was primarily an expression of poetry, emotion, depth and delicate nuances. More than 230 of his compositions have been preserved, only a few manuscripts and pieces from early childhood have been lost. There is a total of about 80 opus numbers. The piano is present in all of them, and most of them are for solo piano. In spite of poor health and a short life, his works include 27 etudes, 26 preludes, 21 nocturnes, 58 mazurkas, 17 polonaises, 19 waltzes, 4 impromptus, 2 concertos, 4 ballades, 4 scherzos, and 3 sonatas as well as several other pieces (7).

Several other well-known composers such as Wolfgang Amadeus Mozart (1756–91), Franz Schubert (1797–1828) and Felix Mendelssohn (1809–47) also died before they were 40 years old. However, these composers died rather suddenly and unexpectedly whereas Chopin had poor health for most of his adult life (fig. 1).

Medical history of Chopin’s family

Chopin’s father suffered to some extent from respiratory tract infections, but lived until he was 73 years old. His mother had good health and died aged 77 (6, 8, 9). Chopin had three sisters. Isabella died aged 70. Ludwika suffered extensively from respiratory tract infections and allegedly died of a lung disease aged 47. Emilia was a vivacious child with poor health. She suffered from recurrent respiratory tract infections, dyspnoea, loss of weight and haematemesis, and...
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died after a massive upper gastrointestinal haemorrhage only 14 years old (5, 6, 9).

Chopin’s chronic symptoms

During his teens, Chopin had frequent respiratory problems, diarrhoea and loss of weight (6). In 1826, 16 years old, he had a period of six months with symptoms including cough, headache, and swelling of the cervical lymph glands (3, 6). He had similar symptoms while living in Vienna as a 20 year-old (10, 11). Many episodes of bronchitis and laryngitis are described during the period from 1831 to 1835. He never developed proper facial hair or beard, and although it is thought that he had sexual relations with several women, he never fathered any children (11, 12).

During an epidemic of influenza in Paris in 1837, Chopin developed high fever, haemoptysis and haematemesis. His doctor, Dr Paul-Léon-Marie Gaubert (1805–66), considered that he did not suffer from tuberculosis and recommended a warmer climate (6). It has been speculated whether this physician really thought that he did not have tuberculosis, or whether he chose a different diagnosis to avoid possible stigmatisation of a patient with this disease (6). Chopin was constantly troubled by dyspnoea and tired easily. He often had to be carried to bed after having played the piano for a long time.

In 1836 he met the author Aurore Dudevant (1804–76), better known as George Sand. In November 1838 he accompanied her and her two children to Mallorca to escape the winter (3, 6, 8). The journey did not have a good effect on his health. In Valldemossa (fig. 2) he was constantly troubled by fever, cough and diarrhoea. In spite of this he was productive. The 24 preludes (opus 28 found its’ final form during the stay in Mallorca. The doctors he consulted there considered that he had tuberculosis (8, 10). The local population therefore avoided him for fear of being infected. George Sand had to pay for his furniture to be burnt when they left Valldemossa (3, 6, 8). In February 1839 they returned to the mainland and spent some time in George Sand’s country house Nohant, but they moved back to Paris during the autumn. From 1840, Chopin’s health condition deteriorated. He lost still more weight (weighing only 45 kilograms) and was described as pale, thin, and looking ill (6). A caricature drawn by a friend in 1844 clearly shows that he had developed a barrel chest (6, 13).

Chopin had several periods of depression (3). He complained of depression, hopelessness, apathy and sleeplessness during his stay in Vienna in 1830–31 (3), probably as a reaction to the uprising in Poland and his doubts about moving to France. Later in his life, his episodes of depression seem to be related to exacerbations of his disease (3). It can therefore be speculated whether his mental health was an expression or a consequence of a progressive chronic disease with severe symptoms or whether he suffered from a primary mental disorder.

The last years

He experienced a better period during the winter of 1847. Although he was still short

Figure 1 The only known photograph of Chopin, 38 years old

Figure 2 The town Valldemossa on Mallorca, where Frédéric Chopin and George Sand spent the winter of 1838–39. Photo Istockphoto
Cruveilhier (1791–1874) (6, 15). He was the first to describe the disease was published in 1810 (18). The tubercle bacillus, however, was first demonstrated in 1882.

In the 19th century, treatment of pulmonary tuberculosis consisted of rest, good nourishment and strengthening of the body’s own defence mechanisms (18). This usually took place in separate sanatoria, which also acted as isolation institutions for infectious people. It was thus a prevalent disease when Chopin was alive. He could have been infected during his youth by his sister Emilia. She may have died of tuberculosis, but this does not give a good explanation of her gastrointestinal haemorrhages. If Emilia had suffered from miliary tuberculosis, but this does not give a good explanation of her gastrointestinal haemorrhages. If Emilia had suffered from miliary tuberculosis or direct progression of a primary lesion, her symptoms would probably have been more dramatic, given her very young age (15). However, none of the other members of the family had obvious signs of tuberculosis (15).

Chopin's haemoptysis can be explained by the disease, but lack of finger clubbing and his haematemeses and diarrhoea point towards another diagnosis. Although Cruveilhier’s autopsy report has never been found, second-hand reports indicate that he was convinced that Chopin suffered from another disease (8, 10, 17). If the composer really had tuberculosis, it is conspicuous that he did not infect those in his immediate surroundings – such as George Sand and her two children – in the course of a long period of exposure (8).

Cystic fibrosis

Cystic fibrosis is a hereditary congenital disease affecting the glandular function of several organs including the lungs, gastrointestinal tract and pancreas (19). Those affected have abnormal respiratory secretion and diminished local mucous membrane defence in the Airways. This predisposes to colonisation and infection by different microbes that seldom cause disease in healthy individuals. Most patients need frequent and prolonged treatment with antibiotics for bacterial infections and colonisation in the airways.

Cystic fibrosis is the commonest known autosomal recessive hereditary disease (19). During the period before antibiotics, patients seldom lived until they were 30 years old. However, there are different degrees of severity of this disease and it cannot be ruled out that Chopin had a mild form (12). The condition is associated with recurrent episodes of pneumonia, pancreas deficiency, liver cirrhosis and infertility. This fits in with the fact that Chopin had no children, and with his diarrhoea, which was possibly caused by pancreas insufficiency with fat intolerance and steatorrhea (8).

**Alpha-1-antitrypsin deficiency**

This is a codominant hereditary disease where the alpha-antitrypsin level in the blood is too low. There are various genetic variants, but among those who develop the disease, 95% have a deficiency of what is termed the Z gene (or Z allele) (9, 13). Some genetic variants predispose primarily for liver disease, others for lung disease and some for both conditions (9, 20). The symptoms of alpha-1-antitrypsin deficiency include dyspnoea, recurrent respiratory tract infection or obstructive asthma with poor response to normal treatment. Those affected may develop pulmonary emphysema at the age of 30 to 40 years. The disease may also lead to impaired liver function in some patients and liver lesions are very common. Some patients develop cirrhosis and liver failure (6).

Alpha-1-antitrypsin deficiency could explain Emilie’s death at the age of 14 of...
haematemesis, possibly caused by oeso-
phageal varices due to portal hypertension
(9). It is true that one might have expected
concurrent icterus or ascites, but these
findings have not been described (8, 9).
Alpha-1-antitrypsin deficiency could
explain Chopin's recurrent pulmonary
infections, loss of weight and gastrointestinal
symptoms. He suffered from these
symptoms throughout his whole adult life.

Diagnosis and pathography
It is possible that Chopin suffered from the
same disease as his sister Emilia, and likely
that his doctors were uncertain about the
condition. In several articles, various diffe-
rential diagnoses have been discussed (3, 6,
21–23), and at present there is no absolute
agreement on the cause of death.

Articles dealing with diseases in
deceased famous people are often called
pathographies (24, 25). A pathography may
be written as a testimony of the disease,
almost a travelogue describing the experi-
ences of the author in a new and unac-
customed landscape (25). Differential dia-
gnoeses may be interesting, but are often
cumulative and assessed on the background
of observations made by others in a non-
medical context. This means that it is com-
pletely impossible to test a hypothesis about
which disease was really present.

However, in the case of Chopin we pos-
sess organic material that could theoret-
ically be tested against some of the relevant
differential diagnoses. Chopin’s heart is at
present in a crystal urn filled with alcohol,
bring back from Paris by his older sister
Ludwika in 1849 and stored in The Holy
Cross Church in Warsaw. With today’s gene
technology, it might be possible to discover
whether he suffered from cystic fibrosis or
alpha-1-antitrypsin deficiency. Dr Michal
Witt from the Institute of Molecular and
Cellular Biology in Warsaw has applied for
permission to carry out genetic tests on
Chopin’s heart (12). However, a spokes-
woman from the Polish Ministry of Culture,
Iwona Radziszewska, stated on 21 July
2008 that it had been decided that permis-
sion would not be given to carry out these
tests (26).

Conclusion
In spite of his debilitating disease, Chopin
was musically creative, even during periods
with deterioration of his symptoms. We will
probably never discover the cause of death.
The most likely differential diagnoses are
tuberculosis, cystic fibrosis or alpha-1-anti-
trypsin deficiency. It is important to know
what Chopin died of in order to enjoy his
music?

Of course not!
Many composers admired and found
inspiration in Chopin’s music (3, 27). The
rest of us can also be inspired by a com-
poser and brilliant pianist who, in spite of
a serious disease and suffering for most of
his short life, worked so hard and produced
such fantastic piano compositions.

On the other hand, it is interesting to make
medical speculations about how so many
years of suffering might have influenced
Chopin as a composer and performing artist.
He was not a pianist for large concert halls
and preferred small salons (27, 28). His touch
could lack power (10), and he preferred short
compositions (7, 11, 28). This could be
related to his physical limitations, but could
of course also be an expression of a deliberate
piano technique and musical expression.
The episodes of depression may have been
secondary to exacerbation of the disease, but
a primary mental disorder cannot be excluded
(3, 11). Nevertheless, it is striking that the
years between 1839 and 1846 were his most
creative period, and coincided with deteriora-
tion of his condition (3).

In conclusion we can reasonably con-
clude that Chopin's illness must have influ-
enced his musical expression, which is
characterised by intimacy, melancholia and
sentimentality (7).

Reported conflicts of interest: None

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