

Jussi Björling's heart was beating 200 beats per minute

by Märten Rosenqvist

Professor, Chief Physician, Department of Cardiology, Stockholm South General Hospital
(translation Richard Copeman)

The excitement was palpable that evening, May 20, 1958, at the Royal Theatre in Stockholm. The two Swedish opera giants, Birgit Nilsson and Jussi Björling, would again meet at the Stockholm Opera in *Tosca*. The theatre was crowded, and the press present—for tonight's performance could not be anything but magnificent. But already in the first act, something happens. Björling cannot sustain the tone. He can only whisper the lyrics. He had suffered one of his recurring vocal cord problems.

Reading the old newspaper clippings from Björling's career may give the impression that cancelled performances were more the rule than the exception. If we exclude involvement during adolescence, 1915-1927, Björling appeared in 2,228 performances, that is about 70 times per year. According to Björling Museum in Borlänge, Björling cancelled 180 times (that we know of) for various reasons. This is equivalent to 8 percent, that is 5-6 times per year. Given his fully booked schedule of travel, rehearsals and recordings, this was perhaps not so remarkable. Björling, however, was often heavily criticized in the media for cancellations. It is well known that Björling, as well as his father had alcohol problems, and often felt pressured by the public's high expectations. Both of these factors may have driven him to cancel appearances. However, there is another possible cause. Several biographies of Björling show that he had "heart trouble". The nature of these disorders is not fully understood, but sev-

eral times symptoms of palpitations or "fluttering heart" are mentioned as well as "atrial fibrillation."

Questioning assumptions

At a performance of *Bohème* at Covent Garden in London, March 1960, before the English royal family, the show was delayed by 30 minutes due to one of these attacks. According to accounts Björling was collapsed, pale and sweating but could eventually carry on with the show. The *Aftonbladet* in February 2011 quoted claims by Björn Ranelid, one of the authors of the recent Björling Jubilee book edited by Jacob Forsell, that Björling could have had a "major heart attack" during the performance. What this statement is based on, is unclear.

Symptoms of palpitations are well known to have multiple causes, often quite benign such as "extra" beats, a common cause of the patient seeking medical advice. The diagnosis is usually reached with the help of a careful medical history and EKG. Heart palpitations may also arise from actual heart racing, or tachycardia. Tachycardias can be supraventricular, for example atrial fibrillation, atrial flutter or re-entry tachycardias, such as WPW syndrome. Most often, these arrhythmias are not life threatening but can cause dizziness and sometimes fainting. Ventricular tachycardias are, unlike the supraventricular, potentially life-threatening and can cause sudden death. A rapid tachycardia that is persistent may also lead to a failing heart function, which in turn relatively quickly



Cardiologist Rosenqvist in Stockholm

can cause cough or shortness of breath. It also may cause sudden hoarseness.

Important documents missing

After receiving permission from the Björling family, medical records were researched. Björling was repeatedly hospitalized because of heart problems. A few weeks before his last concert, in August of 1960, he was admitted to Red Cross Hospital in Stockholm. On this occasion, at least three EKG recordings were made. At the same time, a chest X-ray showed normal lungs and normal heart size. Records show that he was treated with digitalis, orally as well as by injection, and with quinidine.

On 20 August 1960, at the age of 49, Jussi gave his last appearance, at Solliden, Skansen, Stockholm, and on September 9 in the morning, he was found lifeless in his bed at his country house on Siarö in the Stockholm archipelago. He was flown by helicopter to the Karolinska Hospital,

where death was confirmed. From the Karolinska Hospital Björling was taken to the National Institute of Forensic Medicine, where he underwent an autopsy. The death certificate was written by Dr. Sander Izikowitz, psychiatrist and one of Björling's family doctors. The diagnosis is "Functio laesio cordis + Morbus arteriosclerosis cordis", a rather vague diagnosis which really only indicates that Björling died of "heart condition and had atherosclerosis of the heart." A search for the autopsy report reveals that it has disappeared, which according to the manager of Forensic Medicine is extremely rare.

Fatality outside hospital will usually require a police investigation and autopsy. Following contact with the National Archives, where the police reports are filed, it appears that the report is registered, but the folder with the report itself is also missing. One can naturally wonder if it's a coincidence that both of these reports have disappeared.

Some evidence

What type of tachycardia was present on the EKG No. 3 at the Red Cross Hospital? The EKG is not easy to interpret. A number of prominent arrhythmia specialists in Sweden have been asked to study the EKG. There is consensus in the diagnosis of a supraventricular tachycardia, but then it becomes more difficult. It seems impossible to get further in the differential diagnosis, for accurate diagnosis requires an intracardiac recording. It seems that the most likely diagnosis is an unblocked atrial flutter. In atrial flutter, atrial impulses are often up to 300 per minute, while the rate in the ventricular chamber rate is about half as fast.

The risk of developing unblocked atrial flutter is particularly high in the presence of so-called Class I antiarrhythmic agents. These include quinidine. The risk of this complication is also increased in the

presence of underlying heart disease. In Björling's case, quinidine was combined with digitalis. Quinidine increases the concentration of digitalis in the blood, thereby increasing further the risk of serious arrhythmia. In Sweden, quinidine is no longer prescribed because of these serious side effects. They were not as well known in the 1960s, and quinidine was then commonly used for the treatment of arrhythmias. At discharge from the Red Cross Hospital on August 10, 1960, Björling received a prescription for the usual dose of quinidine, three tablets twice daily.

Diagnosis uncertain

According to relatives, the autopsy did not reveal any definite cause of death. In the absence of an autopsy report, this can only be a matter for speculation. The most common cause of death of a man in his fifties who dies suddenly is acute myocardial infarction. However, Björling lacked some of the most common risk factors: He was not a heavy smoker, neither of his parents had a known heart condition (they both died of non cardiac-related illness). One brother died young of a brain hemorrhage. Björling had known high blood pressure, but his EKG from 1960 shows no signs of ischemic heart disease or enlarged heart. These findings do not exclude myocardial infarction as the cause of death, but the fact that he was able to sing a complete performance in London in March 1960 would make the theory that he had a "big heart attack," as suggested by Björn Ranelid, seem less likely.

Prolonged and excessive intake of alcohol can cause a so-called alcoholic cardiomyopathy, usually with enlarged heart and symptoms of heart failure. Sometimes one can also suffer with irregular rapid heartbeat, atrial fibrillation. Against this diagnosis is the fact that he had apparently normal heart size on X-ray, with no signs of failure of the lungs, and EKGs

showing no signs of enlargement of the left ventricle.

Could his tachycardia have been the cause of death? We know that Björling repeatedly had attacks of heart racing with circulatory consequences. A probable unblocked atrial flutter was recorded, at least on one occasion, and then with very high heart rate. In these circumstances, medication with quinidine increases the risk of a fatal ventricular arrhythmia. It is unlikely that such a mechanism would have been detected at autopsy.

Sad irony

One could call it an irony of fate that the arrhythmia recorded on Björling's EKG, regardless of the exact diagnosis, today is a curable disease. Cardiac catheterization with high frequency radio ablation makes it relatively easy to eliminate the electrical connections that cause tachycardia. This method was introduced in Sweden almost 20 years ago, and about 2,000 Swedish patients undergo this procedure annually, with very good results. The procedure is performed nearly always with local anesthesia and takes 2 to 3 hours to complete. Complication risk is low, and prolonged follow-up shows lasting good results.

But maybe there was some meaning in this. When one of Björling's greatest admirers in the audience at the Metropolitan Opera was interviewed after his death, her comment was: "He died because God wanted to listen to him alone."

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