
GIACOMO PUCCINI—A GREAT COMPOSER AND A GENIUS

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ABSTRACT

Giacomo Puccini is one of the most renowned opera composers in the world. He continued the work of Giuseppe Verdi. Italian composer Giacomo Puccini was born in Lucca, Grand Duchy of Tuscany on December 22, 1858. In 1880, he entered the Milan Conservatory, where he studied with the famous composer Ponchielli (1834–1886). Puccini began writing his last opera *Turandot* in poor health. The pains in the throat were very painful and prolonged. He showed symptoms of cancer of the larynx and, in the fall of 1924, the condition of the great composer worsened. On November 4, Giacomo Puccini traveled with his son Antonio to the city of Brussels, where he underwent radiation therapy. After the radiotherapy he temporarily felt better and in Brussels he attended the performance of the new opera *La bohème* for the last time. Puccini worsened and, on November 29, 1924, he died in Brussels, Belgium. The purpose of the scientific publication about Giacomo Puccini is to draw attention to the topic of diagnosis and treatment of cancer of the larynx. In most cases of cancer of the larynx, as well as in 90% of cases of head and neck cancer, prevention is possible thanks to lifestyle changes to avoid carcinogenic factors. We must emphasize that timely diagnosis of laryngeal cancer is a key to its therapy. Cancer of the larynx is curable in more than 70% of cases if diagnosed early. The diagnosis is made by an otorhinolaryngologist, who must do an endoscopic examination of the larynx.

Keywords: *Giacomo Puccini, cancer of the larynx*

INTRODUCTION

Giacomo Puccini is one of the most renowned opera composers in the world. He continued the work of Giuseppe Verdi. Italian composer Giacomo Puccini was born in Lucca, Grand Duchy of Tuscany on December 22, 1858. In 1880 he entered the Milan Conservatory, where he studied under the famous composer Ponchielli (1834–1886). Puccini began

writing his last opera *Turandot* in poor health. The pains in the throat were very painful and prolonged. He showed symptoms of cancer of the larynx and, in the fall of 1924, the condition of the great composer worsened. On November 4, Giacomo Puccini traveled with his son Antonio to the city of Brussels, where he underwent radiation therapy. After the radiotherapy he temporarily felt better and in Brussels he attended the performance of the new opera *La bohème* for the last time. Puccini worsened and, on November 29, 1924, he died in Brussels, Belgium.

AIM

The purpose of the scientific publication about Giacomo Puccini is to draw attention to the topic of laryngeal cancer diagnosis and treatment.

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Received: 2022

Accepted: 2022

MATERIALS AND METHODS

For the period September 2018–October 2021, in the available scientific databases—PubMed, BioMed Central, ScienceDirect, Scopus, Web of Science, Embase, a systematic analysis of scientific publications investigating the history of the great composer Giacomo Puccini, the diagnosis and treatment of laryngeal cancer was conducted.

RESULTS

Laryngeal cancer is one of the most common head and neck diseases. The main symptoms of cancer of the larynx are persistent hoarseness that develops gradually, difficulty in swallowing, persistent pain in the throat or pain when swallowing, pain in the ear, the appearance of heaviness in the throat.

The main causes of developing laryngeal cancer are smoking, alcohol and gastroesophageal reflux. More than 95% of laryngeal cancer patients are smokers. Smoking is a factor, because it causes a change in the lining cells of the respiratory system. A smoker's chance of developing laryngeal cancer increases not only with how much they smoke, but also with how long they do. Alcohol favors the development of laryngeal cancer. In fact, alcohol potentiates the effects of cigarettes. People who smoke and drink at the same time are at greater risk of laryngeal cancer. Gastroesophageal reflux is a disease, which is characterized by the return of stomach contents to the larynx, and is believed to contribute to the development of laryngeal cancer.

Timely diagnosis of laryngeal cancer is key to its therapy. Cancer of the larynx is curable in more than 70% of cases if diagnosed early. The diagnosis is made by an otorhinolaryngologist, who must do an endoscopic examination of the larynx, introducing a camera into the throat through the nose or mouth. If damage to the mucosa is found, the patient should be taken to the operating room, where under microscopic control the exact damage can be determined and small pieces taken for biopsy. If the damage is not extensive, it could possibly be removed with a laser. Very often, it is necessary to apply radiotherapy—either as an adjunct or as the only therapeutic outcome. If the mucosal damage is at a more advanced stage, it may be necessary to remove the entire larynx. In such cases, a special cannula is placed so that the patient can speak. Patients with

a change in voice or persistent hoarseness should consult a doctor. This is even more imperative in cases where these patients smoke or drink large amounts of alcohol.

The first symptoms of the disease in the composer appeared in February 1924. As a result of many years of smoking, he began to complain of sore throat. Puccini turned to some doctors who prescribed a number of natural remedies, including mouthwash, milk, honey, raw eggs, treatment with heat, gargling with water and salt, because he continued to have symptoms. At the time there had been complaints of tonsillitis and pharyngitis for 7 months. None of the applied treatments had a positive effect (1,2). Subsequently, the sore throat was accompanied by severe earaches and pain when swallowing. The dysphonia worsened and swelling appeared. On November 2 in Florence, three otolaryngologists examined Puccini. After their consultations and taking a laryngeal biopsy, a walnut-sized external cancer of the supraglottis was found (3). Back then, laryngeal cancer was classified as either internal or external. Internal cancers of the larynx are lesions arising within the larynx, which are relatively benign in nature. They grow slowly and metastasize to the glands only at a later stage. The biological behavior of extrinsic carcinomas, which appear at the opening of the larynx, was considered to be much more malignant with lymphoid metastases at a very early stage. After 1940, with the rise of the antibiotic era and some advances in surgery, radical laryngeal surgery, with or without neck dissection, was used for more advanced lesions (3–5). Puccini went to the clinic of Dr. Louis Ledoux in Brussels, where cancer of the larynx was treated with radium therapy. When Puccini traveled to Brussels on November 4 he vomited blood. On November 7, Puccini began the radiation therapy with a collar containing radium, placed around his neck for several hours a day. The result of the external application of radium was relatively quick; the clinical condition improved in the following days, the hemoptysis stopped. Puccini regained appetite and started smoking tobacco again. On November 24, Ledoux inserted seven radioactive needles into Puccini's larynx. The operation took three hours and 40 minutes and was performed under local anesthesia. A tracheotomy was performed and a nasogastric tube was inserted. Dr. Ledoux's plans

included leaving the radioactive needles in Puccini's throat until November 30. The famous composer could not speak because of the radium needles. He was given food through a nasogastric tube. At six o'clock in the evening on November 28, Puccini suffered a heart attack. The wound began to bleed. The needles were immediately removed. A morphine injection was given. Despite the activities performed, Giacomo Puccini died on November 29 at the age of 66 (1–3).

Laryngeal cancer treatment has evolved over the years. Radiation therapy entered modern medicine with the development of cobalt-60 sources and the linear accelerators in the second half of 20th century (8).

CONCLUSION

Laryngeal cancer is one of the most common head and neck diseases. The topic of laryngeal cancer diagnosis and treatment is very popular currently. Smoking is one of the main etiological factors for the development of cancer of the larynx. The great composer and genius Giacomo Puccini, thanks to many years of smoking, got cancer of the larynx and died of it. Laryngeal cancer treatment has evolved over the years. Radiation therapy is an indispensable part of modern medicine.

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