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Review

The Sound of Jacqueline du Pré: Revisiting her Medical and Musical History

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Abstract

Jacqueline du Pré was a British cellist, famous for her masterful interpretations and her passionate style of playing. Her outstanding musical career was, unfortunately, cut short by multiple sclerosis. In the present paper, we conduct a historical and medical analysis of her life story, discussing a few aspects regarding her illness and treatment options available at the time of her diagnosis.

Keywords: Multiple sclerosis, history, history of medicine, music, neurology

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Introduction

The life of an artist is frequently torn amidst reason and emotion; alternating between the importance of precision in performance of the instrument and the intuitive understanding of the passion with which the music was written. While many musicians have trained to achieve a flawless technique, others instinctively grasp the intention of the composer and the dynamics within a piece of music. Jacqueline du Pré was, without question, an example of both virtues. Her outstanding musical career was, unfortunately, cut short by multiple sclerosis. In the present paper, we conduct a historical and medical analysis of this renowned cellist, and discuss a few aspects regarding the course and management of her condition, reviewing the available treatment options of her time and how they may have influenced the outcome of her disease.

We reviewed existing literature and recorded interviews with the musician, her husband Daniel Barenboim, as well as close friends and family, and used them here as a bibliographical source. Interpretations of historical records vary depending on the people who were interviewed and how close they were to the cellist.

Biography

Jacqueline du Pré was born in Oxford on 26 January 1945. Called 'Jackie' by family and friends, she was by far one of the most prominent chamber music players and perhaps the best cellist of the twentieth century. She was born to two British musicians who always encouraged a nurturing musical environment for Jacqueline, her brother Piers and her sister Hillary. When she was five years old, her mother gave her a cello as a gift. It was then that she discovered the sound of this instrument, a unique voice that would forever be with her. She was gifted with a unique personality, her smile could easily captivate and enrapture anyone who knew her or who spent only a few minutes talking to her. She would shortly be given the nickname 'Smiley', by her future husband and close friends, as a reminder of her everlasting sweetness.[1,2] Carol Easton recalls in her book 'Jacqueline du Pré: a biography', that Jacqueline did not just like people, she loved them and was prone to constant displays of affection.[2]

At the age of 11, she obtained her first recognition as a musician, the Gilhermina Suggia scholarship, which allowed her to meet the great William 'Bill' Pleeth, one of the most experienced teachers of her time. As a virtuous student, Jacqueline progressed rapidly in her musical training. From that moment on, her entire life would revolve around playing the cello.[3] Despite having had multiple teachers and instructors, some of them notorious cellists like Pablo Casals and Mstislav Rostropovich, she always spoke about Pleeth as her true teacher, and

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used to call him 'my cello daddy'. Pleeth was the first one to perceive Jacqueline's immense potential and later would catapult her into success. He recalled in an interview, an anecdote of one of their first lessons: she was instructed to learn the first part of Piatti's caprices and the first movement of the Elgar concerto. He gave the music sheet to Jacqueline on a Thursday afternoon. By Saturday morning, the day of the next lesson, she said she had practised very little. Pleeth calmly told her to give it a try, and the virtuous student proceeded to play the first caprice, and one and a half movements of the concerto entirely, from memory, without missing a single note. Jacqueline had just over a day with the parts but managed to learn these extremely difficult pieces of music, after only practising 'a bit'.[3]

Jacqueline believed music rose above all feelings, and that it was her duty to reveal to the audience the deepest feelings in the composer's soul, through the colours and tones of the instrument. Her technique, natural and instinctive, was defined by the interpretative freedom she possessed.

After numerous and very noteworthy concerts, the du Pré family moved to London in 1958, and in that same year, still under Pleeth's tutelage, the artist began seriously to study the piece that would make her famous: Edward Elgar's cello concerto in E minor. It would not be too long before the Elgar concerto and the name Jacqueline du Pré became one and the same.[3]

At age 15 she became the youngest person ever to be awarded the Queen's Prize. One year later, in 1961, and after studying under Pablo Casals, Jacqueline made her professional debut in Wigmore Hall, London, using a Stradivarius made in 1673 and donated by Ismena Holland. At 18 she was already a soloist with the BBC Symphony Orchestra, and was famous all over England as the greatest cello player known (see Figure 1).

After a couple of years of musical hiatus, away from the stage, she took refuge in the study of math and other sciences for an undocumented reason.[2] Jacqueline was then thrust into her first concert tour in the United States of America, alongside her new acquisition: a 1712 Stradivarius once owned by the Russian prodigy Carl Davidoff. By that time she was already starting to experience numbness in her fingertips. Acclaimed by national and foreign press, critics and the audience that attended her remarkable presentations, Jacqueline was considered as a deeply emotional and expressive performer. Her execution of the cello was unparalleled. It did not matter, whether up close or from afar, the music she produced was hypnotic and filled with extraordinary beauty.

Figure 1. Jacqueline du Pré http://albertonotar.it/post/11573633803/un-lingotto-di-jackie.

In 1965 she made her first recording of the Elgar concerto with the London Symphony Orchestra under the conduction of maestro Barbirolli. Her masterful interpretation became an immediate success in sales. This version is often referred to as 'legendary' or 'definitive'. So much so that Rostropovich himself and other cellists decided to remove the Elgar from their repertoire, as Jacqueline's version was pure perfection, and they considered it unwise to attempt to emulate her dramatic and emotional style.[4]

In 1966, during a Christmas party where she was invited to play, Jacqueline met the Argentine–Israeli pianist and conductor Daniel Barenboim, who she would marry the following year (see Figure 2). The newlyweds would dazzle audiences with wondrous shows and concerts that would take them to various cities across North America and Europe. In 1971, after lengthy rehearsal sessions and presentations in the USA, Jacqueline returned unexpectedly to England afflicted by profound exhaustion. In 1972, when she returned to the stage, she noticed the numbness in her fingers had worsened significantly. Dysthymia, dysarthria and fatigue shortly followed. Her last concert took place in February in New York, marking the tragic and sudden end of Jacqueline's brilliant career, when she was only 28 years old.[4]

She would, from then on, play less and less until she dropped it altogether. It was a great misfortune, probably brought about by multiple clinical factors. Listed among them: tremors, dexterity issues, severe hypoesthesia, loss of distal proprioceptive function, and perhaps early symptoms of astereognosis. All of these would explain the difficulty to control her hands, fine motor skills and overall tactile perception of the instrument, thus affecting her ability to play the cello in the way she used to. By then she could no longer feel the strings of the cello under her fingertips or the weight of the bow in her hands. Her playing was then only determined by her visual and auditory perception during execution.[4]

Illness

Back in London, Jacqueline was diagnosed with multiple sclerosis in October 1973, four years after

Figure 2. Jacqueline du Pré and Daniel Barenboim. Hulton Archive, via Getty Images https://www.nytimes.com/2017/10/27/arts/music/jacqueline-du-pre-cello-concert.html.

the onset of her symptoms. The media scandal that ensued resonated throughout England, but the cellist and her family were optimistic regarding the prognosis and were even expecting an improvement.

In the opening scene of a video documentary, a very noticeable intention tremor can be observed while she is making tea. As she reaches for and lifts the teapot, her hand trembles and she has difficulty holding it and pouring it into the cup. Her gait and posture could indicate the presence of dizziness and cerebellar symptoms.[5]

Although sometimes she was able to play the cello without any apparent limitations, the symptoms of sensitive and motor dysfunction persisted and became increasingly more frequent. In 1975 her condition worsened, according to new tests performed at the Rockefeller Institute in New York. One year later, in 1976, she received the Order of the British Empire while already in a wheelchair (see Figure 3).[3]

After being awarded all sorts of recognitions and accolades all over the globe, including the Order of the British Empire in 1976, the British Record Industry Trusts Show Award for best classical soloist album in 1977 and 'Musician of the Year' in 1980,[4] and not being able to part with that which she had done her entire life, Jacqueline started teaching. She was regarded by her students and other people who knew her as a wonderful teacher. Easton, who once attended a lesson, said: 'her comments were invariably constructive – try this, try that, more bowing, make it more of a statement – and delivered with patience and great good humour'.[2] Her final years were spent in a wheelchair due to the progressive motor impairment and cerebellar dysfunction.[6] In several interviews, kyphotic posture, head tremors and some other neurological manifestations can be observed.[7]

It could be argued that depression would be a foreseeable consequence of the various symptoms that Jacqueline presented. She lost the ability to perform at a very early age and, presumably, at the highest point of her career. Such loss is tremendously painful for anyone and surely it caused her a great deal of suffering. Her playing was her voice and she was left mute by her disease.[7]

In spite of all of this, she always smiled. Was her cheerful gesture hiding her underlying burden? As she does a recollection of her most excruciating memories, it seems like her body language does not convey the sadness of her story. Her mood appears to be non-expansive.[7]

Jacqueline's positive and cheerful attitude towards life may have given her the strength and resilience needed to cope with her disease and to find a way to remain active musically in a creative way. Since she started taking corticosteroids, which were the available treatment at the time, it is possible that her

Figure 3. Jacqueline du Pré and Daniel Barenboim after the OBE award ceremony. Classic FM Collecting her OBE http://www.classicfm.com/artists/jacqueline-du-pre/pictures/iconic-pictures/obe/.

emotional state remained unchanged as a collateral effect. Euphoria, restlessness and augmented motor activity are some of the behavioural changes in patients treated with steroids. It is therefore plausible to think that the reason Jacqueline constantly smiled and appeared upbeat was a cause of two variables: her charming personality as well as a potential manifestation secondary to cortisone.[8] In Carol Easton's book, Jacqueline herself said that multiple sclerosis had one benign symptom which she referred to as 'giggleitis', she laughed with ease and pleasure and was able to forget, albeit for a moment, her condition.[2]

Jacqueline du Pré died on 19 October 1987 at the age of 42, putting an end to an extremely painful and incapacitating affliction. Her death remains, to this day, one of the greatest tragedies of modern music history.[6]

In 2013, in the last interview programme conducted by renowned British journalist David Frost, Jacqueline's husband, Daniel Barenboim, discussed his relationship with the cellist. He spoke about the first time they met. He remembered it as an extraordinary encounter, in which he was entranced by this woman's performance. In spite of her youth and lack of experience, her way to play was magnificent and seemed virtually effortless.[9]

When Frost enquired about the time Jacqueline and Barenboim spent together 'carefree', he was astounded by the musician's answer: 'eighteen months'. It is of significance to comment on a remark made by Barenboim regarding Jacqueline's illness. He mentioned that her first symptoms started shortly after undergoing anaesthesia for a simple procedure. After recovering, she referred to loss of tactile sensation in a region of her right thigh.[9]

The diagnosis and management of multiple sclerosis in history

Multiple sclerosis is a progressive demyelinating neurological disease of autoimmune aetiology, in which changes occur both in grey and white matter. Its clinical manifestations encompass a broad spectrum of signs and symptoms, and its clinical course is usually characterised by long episodes of remission followed by subsequent relapses. Cognitive impairment, contrary to previous evidence, appears during the early stages of the disease.[10]

In spite of the information that may be interpreted from newspapers, magazines and the meticulous observation of Jaqueline's interviews, it is difficult to identify clearly the clinical subtype of her condition. Corona and Poser in 2004 were the first to suggest that she may have had relapsing–remitting multiple sclerosis (RRMS) that evolved into secondary progressive multiple sclerosis (SPMS). According to the authors, her first symptoms were sensory disturbances, abrupt humour changes and fatigue.[11]

Moreover, Barenboim's remarks, and the periods of time when the cellist reported she was too tired to keep playing, lead us to assume that it was RRMS. This subtype is the most prevalent in the global population (affecting 85% of individuals), which is 'characterised by episodic exacerbations, during which symptoms develop over a few days, remain for several weeks or months, and then resolve either completely or partially'.[12] In correspondence with clinical evidence, 10–20 years after the onset of RRMS, patient develops SPMS, which could explain the accelerated deterioration of Jacqueline in her last years of life.[12]

The first recorded descriptions of multiple sclerosis known to modern medicine date back to the fourteenth century; however, it was French neurologist Jean Martin Charcot who first linked the clinical presentation of this condition with the disease known as sclérose en plaques found in postmortem pathological samples in 1866.[10]

As long as a specific cause from the pathophysiological standpoint is not known, it is very difficult to devise an effective treatment. Currently, the treatment of multiple sclerosis has advanced significantly. Disease-modifying therapies reduce the severity and frequency of clinical manifestations. Some patients with proper treatment can even reach a clinical state known as no evidence for disease activity (NEDA).[13] Throughout history, various therapeutic strategies have been used with highly variable rates of success.

Corticosteroids were first used in the 1960s and, while they reduced relapses, cortisone had no effect in slowing or arresting disease progression. In the following years, multiple clinical trials were conducted using different medications such as cyclosporine, cyclophosphamide and azathioprine in order to assess their effectiveness as disease modifiers and their use in active plaque reduction.[10]

Early trials with interferon (IFN)-type immunomodulatory drugs were undertaken using IFNγ, which

actually increased severity. Sometime later, IFNβ and IFNα were tested; IFNβ proved to have better results and tolerance in patients. In 1993, a clinical trial was published with 372 individuals who underwent treatment with IFNβ-1b for RRMS. Due to the improvement in nearly 30% of patients compared to placebo, IFNβ-1b became the first effective therapy to modify the normal course of the disease.[10] The Controlled High-Risk Subjects Avonex Multiple Sclerosis Prevention Study (CHAMPS) showed that the early initiation of IFN therapy at the time of the first demyelinating episode was beneficial for patients with active lesions on imaging studies that indicated a high risk of developing definitive clinical multiple sclerosis.[14] Similarly, the Effect on Early Interferon Treatment on Conversion to Definite Multiple Sclerosis Randomized Study (ETOMS) demonstrated that IFNβ-1b administered to patients with a first episode suggestive of multiple sclerosis delayed the onset of a second event.[15]

Schumacher's criteria was the first diagnostic tool for multiple sclerosis and was established in 1965. It included 'objective abnormalities on neurologic examination attributable to dysfunction of the central nervous system, evidence of involvement of two or more separate parts of the central nervous system especially in the white matter, a particular age ratio to be diagnosed (10–50 years old), and involvement of the neuroaxis occurred in two or more episodes of "worsening", separated by a period of one month or more, each episode lasting at least 24 hours, or, slow, or step-wise progression of signs and symptoms, over a period of at least six months'.[16]

Five years after Jacqueline's death, Poser introduced new diagnostic criteria, which included laboratory findings such as oligoclonal bands to improve sensitivity and specificity.[17] In 2001, the McDonald criteria were presented as the current diagnostic approach, including imagenological findings as the gold standard.[8]

Jacqueline du Pré was diagnosed a full four years after the onset of the symptoms described by Barenboim,[9] but the available treatment options she had were insufficient at best. Citing a review of the *British Medical Journal* from that year, therapy in multiple sclerosis was determined by what was known then as 'medical-social care' that included measures such as: bed rest for a week or more, correction of any physical or psychological factors that increased the risk of recurrence, use of long action corticotrophin in the acute phase, antispasmodic drugs in the paraplegic patient and rehabilitation in a multidisciplinary manner. Although there are no public medical records of Jacqueline, it is possible to infer what the standard treatment for the disease at that time was, and how it could have impacted the quality of life of the artist.[18] As her illness progressed, some signs and symptoms began to be noticeable, such as those observed in a 1980 interview: Jacqueline reported that she was no longer able to read, but that she enjoyed being read to very much, and made use of her eloquence and experience to train and guide the new generations of cellists.[2,7]

Corticosteroids may have had adverse effects in Jacqueline. It must be borne in mind that this medication's toxicity is due both to the use of high dosages and to its sudden discontinuation. The prolonged use of corticosteroids can produce different hydroelectrolytic imbalances, generating hypokalemic alkalosis, oedema and hypertension in most cases. Metabolic changes occur as a result of hyperglycemia. The inhibitory effects on the immune system result in a greater predisposition to opportunistic infections. Proximal muscle weakness occurs in a fair number of cases, and when the patient is unable to walk the treatment must be suspended. Behavioural changes occur with some frequency and include insomnia, anxiety, cyclothymia, psychotic episodes and even suicidal tendencies. Other adverse effects may include osteoporosis (in 30–50% of patients) and osteonecrosis.[19]

On film and photographic records of Jacqueline, some signs and features of Cushing's syndrome can be observed, such as the redistribution of body fat. Her face appears round-shaped and there is a noticeable weight gain. She appears to stoop on her chair, a posture that could be the result of increased fat as well as of hypotonia and decreased muscle strength. A typical 'full moon' face and a stooped posture were evident in several of the interviews recorded in the seventies and eighties, as well as the images taken at the imposition ceremony of the Order of the British Empire.

Although the effects of corticosteroids were probably a very important factor during the course of Jacqueline's disease, the demyelinating process itself causes neurodegeneration and its impact on the musician's condition cannot be understated.

Cerebellar dysfunction is also a major factor to consider. Signs of dysarthria are notable in the 1980 interview as well as the fact that she could no

longer read. Abnormal ocular movements can be spotted on careful observation. Oscillopsia could have been present at that time. As she is talking to the interviewer, Jacqueline's eyes move unintentionally and saccadicly in the horizontal axis, which could be pathological nistagmus. Her visual impairment could also be linked to optic neuritis; nonetheless, there is no mention of ocular pain, but it is clear that she completely lost the ability to read and had to be read to.[20]

Closing remarks

What would have happened if Jacqueline had been diagnosed and treated in 2018? She would have been diagnosed earlier, treated promptly and may have retained some of her exceptional complex motor abilities. One could only hope her grace and originality would have lasted for much longer, that her pain may have been averted or somewhat assuaged at the very least. Unfortunately, multiple sclerosis is a heterogeneous and insidious disease and even cases with adequate therapy can be severe and have very poor prognosis. Emerging therapies with monoclonal antibodies seem to shed some light and offer hope to patients and relatives with multiple sclerosis in the coming years.

Current life expectancy in patients with multiple sclerosis has changed as a consequence of available treatments and multidisciplinary approaches towards the improvement in quality of life. Currently, lifespan in England is 83.1 years for women. According to recent studies, a female patient affected with multiple sclerosis is thought to live seven years less than the rest of the population. That means Jacqueline may have lived 34 more years if she had been treated in current times. Even though she was able to teach some years after she was diagnosed, her musical production was suddenly cut short, depriving the world of the magical opportunity of listening to her play.[21]

Better treatment options, available now, could have made things different for Jacqueline. Perhaps, she would have gifted the world with her unique talent for many more years and her legacy would not have been tarnished by the tragedy of her untimely death.

Conflict of Interests

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