

Inaugural issue specimen hypothesis paper

IS CHOPIN RESPONSIBLE FOR MY CERVICAL RADICULOPATHY?

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This whimsical paper is shown here at the inauguration of the Tasman Medical Journal as an example of the final formatting of future publications and the formatting of citations and other elements, and to stimulate the interest of possible authors. It will give way to more traditional (and more scientific) articles as these are received and accepted for publication!

Abstract

1. Piano playing is regarded first as a form of musical and hence artistic expression. However, it is physically demanding and can cause musculoskeletal damage. Frédéric Chopin (1810-1849) was aware of this and advised one student that she should play his étude opus 10 No 1 as he demanded, to ensure the R hand was strengthened and to avoid damage to the hand.
2. The author developed L arm neurological symptoms and R wrist arthritis while practicing the above étude and the 2nd Ballade (opus 38). Though the responsible L cervical skeletal dysplasia and wrist osteoarthritic abnormalities respectively were almost certainly chronic, it is possible that the attempt to master these demanding pieces produced acute symptomatic deterioration.
3. Chopin's music may have exacerbated my cervical spondylopathy but it was my decision to attempt music of this degree of complexity and stress. So the responsibility is mine.

Introduction

Frédéric Chopin (1810-1849) composed predominantly for solo piano. His music remains popular with the listening public and challenging for pianists. In his lifetime the pianoforte was still a young instrument, having been made possible by the invention of "escapement" (of the hammer from the strings) by Bartolomeo Cristofori around 1700. The resulting augmentation of dynamic range was exploited by Chopin (and Beethoven before him) and, as evidenced by Jane Austen's text in *Pride and Prejudice*, the "piano-forte" was a feature of

English drawing rooms by the time of Chopin's birth.¹

In exploiting the instrument, Chopin recognised the substantially increased stressors on the hand. He warned in respect of his étude Op 10 No. 1, which consists of rapid upward and downward arpeggios involving repeated spans greater than an octave, that "...this étude will do you very much good if you study it correctly. It will stretch your hand. But if you study it badly, it will injure you".² This opinion showed amazing foresight, since contemporary understanding is that playing a musical instrument is an athletic activity, and to ignore that fact is to invite the possibility of

various injuries.³ Indeed, a combination of adverse factors affecting a keyboard player can cause symptoms and injuries of the entire upper limb structures including the neck.³

Relevant history

Recently, I worked up Chopin's 2nd Ballade Opus 38 in F major and the Opus 10 No 1 étude. The former interesting and technically difficult piece, published in 1839 but with earlier drafts from around 1835, is a study of extreme contrasts. It includes two semiquaver arpeggio passages marked *Presto con fuoco* (fast, with fire) and a long violent coda marked *Agitato*, which, like Op 10 No.1, contains difficult arpeggio passages, in semiquavers over two octaves. These passages contrast with several soft and melodic Sicilienne passages. They combine to make the 2nd Ballade a most difficult piece. Its demands under my hands as I became familiar with it seemed to increase rather than decrease, possibly because, as the tempo increased progressively towards that implied by the composer's markings, my fingers failed to keep up.

Opus 10 No 1 consists of ascending and descending arpeggios within intervals of 10ths, 11ths and even 12ths, played rapidly. It is designed to strengthen the R hand, and the L hand has little to do but track or announce key changes. At some points the fingering is challenging and marked abduction and adduction of the wrist is required.

My workup of the Ballade occupied February to October 2017, with one break of 4 weeks in May/June. In late July I developed what I thought was a recurrence of L supraspinatus tendonitis suffered 10 years earlier. Supraspinatus tendonitis is associated with playing the piano.³ My original symptoms responded quickly to corticosteroid injection. However, on this occasion the typical shoulder pain and its radiation to the elbow was accompanied by neurological symptoms, namely paraesthesiae affecting the first and second fingers on the left, consistent with MRI findings of severe ipsilateral disc protrusion at several levels including severe nerve root compression at C7. I consulted an orthopaedic surgeon whose examination revealed L triceps muscle weakness and wasting, also consistent with C7 nerve root compression. I subsequently developed similar symptoms on the R, temporarily causing great discomfort and severely limiting abduction of the R arm. Practice became impossible, temporarily. Fortunately, the R-sided symptoms abated quickly, assisted by a judicious mixture of paracetamol, ibuprofen and white wine. This allowed me to perform the piece to a small invited audience in October 2017.

In addition to the above, in 2016 I became conscious of joint pain affecting the medial aspect of the R wrist, with tenderness over the scaphotrapezoidal joint. This occurred several months after initially attempting Opus 10 No 1 the previous year. I have continued to practice this piece taking Chopin's advice into account but nevertheless more likely in a harmful manner that would have attracted his strong disapproval. This symptom also became more noticeable during 2017 as I was also practicing opus 38, and remains. However, I have the impression that the progression of the wrist pain has not been unduly adversely affected by my continued and to date unsuccessful attempts to scale this piece.

Summary and conclusion

My previously asymptomatic state was transformed during the practicing of two of Chopin's most demanding pieces to one of substantial but fortunately temporary loss of neuromuscular function affecting the L hand while working on the 2nd Ballade, and progression of a previous R wrist osteoarthritis, coincidentally manifested originally by practicing the étude opus 10 No 1. It is likely that the R wrist arthritis was exacerbated by injudicious practice of the two pieces. Might one also suspect a contribution to the radiculopathy? This is less certain, but one's posture at the piano is a matter of controversy and practicing difficult pieces tends to induce muscle stress, of psychological or physical origin, which can include the hands, arms, shoulder girdle and neck. Contracting the shoulder muscles at the keyboard is a common fault and can induce muscle pain and loss of function.^{3,4} Ultimately, of course, the decision to study these pieces was mine and thus my responsibility.

The possibility that my discomfort was partly grounded in the work of a genius such as Chopin acts as a consoling counterweight to my symptoms and errors of posture, stress and piano technique. I offer this history as a warning flag for other amateur pianists who, like myself, have the temerity to attempt pieces that are in fact beyond them. But is not striving to achieve what initially appears impossible always admirable, as the basis for beneficial personal and social change?

References

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