CASE REPORT

Raynaud’s phenomenon and the nailfold capillaroscopic findings in a guitar player

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Learning points for clinicians

- Musicians are affected by several well-recognized conditions, among which microvascular abnormalities are the less described and studied, although they can diminish their ability and performance quality. Capillaroscopy is a simple, non-invasive method to diagnose vascular abnormalities in musicians suffering from Raynaud’s phenomenon. The capillaroscopic pattern will be the base for the follow-up of the patient, and will indicate the possible need for further investigations aimed at excluding other occulted conditions.

- This case emphasizes the fact that musicians whose hands are exposed to vibrations may suffer from microcirculation damage, for which reason they should be able to access an effective health surveillance program able to detect the first signs of hand–arm vibration syndrome.

Introduction

Guitarists could suffer from various disorders, due to—and influenced by—biomechanical, postural and psychological components, also favored by the frequency of their practice, the ergonomics of the instrument and their playing technique.\(^1\) Although musculoskeletal disturbances are well recognized, microvascular abnormalities are less described and studied.

Case report

We report on a 30-year-old musician examined for cold-induced blanching and pain in his right hand fingers, which started from the middle and ring finger and spread to all the other fingers: the patient is having difficulties in carrying out several tasks, as well as experiencing a little impairment in his playing ability. He does not feel any tingling or numbness, or a reduced sense of touch and/or temperature far-off the attacks. Although vibration is the underlying cause of the condition, it does not induce the attacks, cold exposure being in fact the main trigger for these symptoms: being in a cold environment and a localized or a general body cooling in an otherwise warm environment.

The disorder was unilateral for a period of 3 years, than it started involving the left hand also (Table 1).

The patient has been playing guitar for an average of 3 h a day since he was 10 years old. His playing technique is a variant of the hybrid pinch widely used on acoustic guitar, consisting in holding the plectrum between thumb and forefinger, using it only if necessary, and pinching the strings with the three remaining fingers. His right hand is not anchored anywhere on the guitar and—interestingly—the patient uses especially the third and fourth finger to pinch the strings. We performed a nailfold video-capillaroscopy (NVC) and we found a ‘non-specific pattern’ typical of the RP\(^2\) (Figure 1).

Discussion

So far, two cases of Raynaud’s phenomenon (RP) have been reported in a slap bass player and in a guitarist,\(^3,4\) and this—as far as we know—is the first NVC study describing and documenting the related microvascular abnormalities. Periungual capillaroscopy allows in a simple, non-invasive way to evaluate
Table 1. Anamnestic and clinical-laboratory features of the patient

| Feature                                      | Description                                                                                   |
|----------------------------------------------|-----------------------------------------------------------------------------------------------|
| He is right-handed                          | He is a smoker since he was 17 years old with about 15 cigarettes a day                      |
| He was not taking any medications           | He has no history of cardiovascular or neurologic disease, diabetes mellitus, thyroid disease, arthritis, or connective tissue disease |
| He has no history of frostbite or carpal tunnel syndrome | He has no family history of primary RP or connective tissue disease.                        |
| The physical examination was unrewarding   | He had no history of cardiovascular or neurologic disease, diabetes mellitus, arthritis, or connective tissue disease. |
| A careful clinical examination and laboratory investigations excluded known pathologies that could lead to nailfold microvascular abnormalities and RP | He did not have symptoms or established diagnosis of connective tissue diseases. He neither presented other known causes able to determine NVC abnormalities nor digital ulcers or skin manifestations suggesting a diagnosis of SLE or scleroderma, or suffering from muscle and joint pain. |

Figure 1. NVC images in a case of a patient suffering of RP showing a non-specific pattern: (a) abnormal NVC pattern without findings suggestive of scleroderma. Characterized by lack of morphological homogeneity of capillaries, presence of (b) enlarged capillaries, (c) ectasia of the efferent tract of the loops, (d) local hemorrhages and (e) neoangiogenesis.
The detection of objective and documented vascular alterations will help the patient achieve a greater awareness of his condition and reassure him, while making him understand the need for a follow-up and, where possible, for a change in some lifestyles and the ways of using the musical instrument. Those musicians whose hands are exposed to vibration may suffer from microcirculation damage, for which reason they should be able to access an effective health surveillance program able to detect the first signs of HAVS.

Taking good care of their hands also contributes to the guitarist’s performance.

Conflict of interest: None declared.

References

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