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Scientific letters

Musculoskeletal injuries secondary to exercise during confinement by the pandemic COVID-19☆

Lesiones musculoesqueléticas secundarias al ejercicio durante el confinamiento por la pandemia COVID-19

To the Editor

Since the start of the coronavirus (COVID-19) outbreak in late 2019 in Wuhan, China,[1] the pandemic has already affected more than 200 countries and millions of people worldwide.[2] The main world governments have decreed mandatory lockdowns and social distancing, increasing sports activity at home, which is often done incorrectly and leads to injuries.[3]

Taking advantage of the current massive use of social networks, we carried out a survey in one of them (Twitter®) seeking to find out the characteristics of the musculoskeletal injuries that are currently occurring during lockdown.

The main author through his Twitter account® @drlopez-martinez with more than 10,200 followers, carried out a free access survey from 14th to 21st of April 2020. A survey of 11 multiple-choice close-ended questions, aimed at obtaining information on musculoskeletal injuries in the current lockdown (Table 1) was completed by 1902 people.

Of the total of 1902 people surveyed, the vast majority were under 45 years of age (77%).

Twelve percent of the respondents had a musculoskeletal injury during lockdown (228 patients), with 35% doing more sports during lockdown than usual.

Sixty-one percent exercised on their own, the rest (39%) report having used apps or social networks to guide their physical activity, being YouTube® (22%) the most used.

The most popular type of exercise was intensity-related (45%), consisting of high-intensity exercises and repetitions in a short time interval (CrossFit®Hiit® and Tabata®), followed by weight-bearing exercises (30%), and finally Yoga/Pilates (14%) and walking (11%).

Regarding injuries, 50% were muscle injuries, 25% knee injuries, 16% tendinopathies and 9% sprains. The most widely used treatment has been conservative treatment using rest, NSAIDs and local cold application (73% of cases), highlighting that 32 patients (5%) have required surgical treatment.

The author of the survey personally verified that many of the injuries derived from playing sports in the hallway of their homes, with repeated knee twists and related injuries (especially meniscus), which he called the "Hallway syndrome". It should be noted that challenges have been posted on social networks related to marathons (42 km) and even 100 km races at home, with all the implications that these may have.

Table 1
Eleven questions from a survey conducted via Twitter® with percentage of responses.

Survey question	Percentage of responses
Age	
<30 years	39
30–45 years	38
45–60 years	15
>60 years	8
Sex	
Male	54
Female	46
Did you practice sports before lockdown?	
<2 times a week	39
2–4 times per week	34
>4 times a week	27
Have you been injured during lockdown?	
Yes	12
No	88
Have you done more exercise during lockdown than usual?	
Yes	35
No	65
How did you do the exercise?	
On my own	61
Youtube®	22
Instagram®/Facebook®	7
Mobile app	10
What type of exercise?	
Walk	11
Weight-bearing	30
Intensity	45
Yoga/Pilates	14
What type of injury have you had?	
Knee	25
Tendinous	16
Muscular	50
Sprain	9
What treatment have you had?	
Rest	73
Physiotherapy	21
Doctor	4
Emergency Dpt.	2
Have you required surgery for that injury?	
Yes	5
No	95
Will your way of doing exercise change once lockdown is over?	
More, at home	11
More, generally	33
No	56

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An overwhelming majority of respondents (61%) were physically active on their own; of those, possibly a high percentage performed activities randomly and rigorously, which would not only be ineffective, but could expose them to injury. The same risk would be taken by the rest of the respondents who use YouTube® and social networks to do exercises, which are recommended on a non-individual basis. And much worse still, many of the *Influencers* in these networks do not have professional qualifications to recommend physical exercise.

Most of the respondents carried out intensity (45%) and weight-bearing (30%) exercises, all this added to the above mentioned scenario results in a population vulnerable to physical injuries, in fact 12% of the respondents have already suffered from some type of lockdown-related injury, and even 5% have ended up requiring surgical treatment.

This study has limitations, it is an Internet survey, which therefore does not allow reliable statistical estimates to be made with the results. We also admit the impossibility of determining the exact injury of the patients, since many of these knee injuries (25% of injured) may require elective surgery once the lockdown has ended. We also do not know of those 5% of cases that have required surgery exactly what type it has been.

Perhaps the great strength of this study is that it deals with a subject of great current interest, and which seeks to alert the public and the authorities about not simplifying physical activity at home.

The current lockdown can increase the rate of psychic disorders, with sport being an essential prevention tool. The recommendation is to do at least 30 min of moderate intensity physical activity daily,[3–5] ideally through individualized advice from specialists in the field.

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Supportive treatment of COVID 19 patients with mild respiratory failure in a primary hospital

Tratamiento conservador en pacientes COVID 19 con insuficiencia respiratoria ligera en un Hospital de primer nivel

Dear Editor:

Clinical manifestations of SARSCOV2 ranges from mild symptoms to respiratory failure requiring mechanical ventilation and death. Different therapeutic approaches have been tested with no solid evidence,[1] or even with no placebo arm (patients without specific treatment),[2,3] as there is no certain knowledge about the mechanism that lead to respiratory failure[4,5] (immunological and inflammatory theories have been proposed.

In Spain, as in many other countries of the world, due to the huge number of patients hospitalized and high mortality, specific treatment for SARSCOV2 (Hydroxyclorquine alone; Hydroxyclorquine plus azithromycin; lopinavir/ritonavir) among with supportive therapies that include antibiotics and/OR corticosteroids when inflammatory markers are elevated in lab test have been used in almost all patients hospitalized, irrespective of respiratory status and time from symptoms onset.

Our Hospital is a primary care Hospital without intensive care unit and samples for SARSCOV2 polymerase-chain-reaction (PCR) have to be sent to reference hospital. Between March 14th 2020 and April 12th 2020 a total of 43 COVID + patients were discharged from our hospital and 30 COVID + patients have died due to complications directly associated with SARSCOV2 infection.

We have retrospectively analyzed clinical outcomes of COVID 19 + patients admitted to hospital with pneumonia and respiratory failure in whom specific treatment for SARSCOV2 was not administered.

Table 1
Clinical characteristics of patients.

Patient	Age	PaO2/FiO2	D Dimer µg/mL	Ferritin ng/mL	CRP mg/L	Lymphocytes $\times 10^3$ µL^{-1}
1[a]	62	219[c]	17.82	859	238	0.6
2[b]	89	285	>20	1086	276	0.9
3	72	290	1.14	1160	95	0.4
4	49	257	1.24	4649	248	0.6
5	43	252[c]	1.93	1932	241	1.6
6	79	250[c]	>20	1358	54	0.3

Highest value of D Dimer, Ferritin y CRP during admission. Lowest value of lymphocytes during admission.
[a] Patient diagnosed using antibodies.
[b] PCR + without treatment.
[c] Respiratory support with ventimak.