



Mini Review

Orthopedic surgical practice in context of the COVID-19 pandemic

Ratko Yurac B^{1*}, Juan J Zamorano¹ and Carlos Valderrama³

¹MD, Spine Surgeon, Professor of Orthopedics and Traumatology, University del Desarrollo (UDD), Clínica Alemana de Santiago, Chile

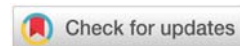
²Orthopedics and Traumatology Resident, University del Desarrollo (UDD), Clínica Alemana de Santiago, Chile

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*Corresponding author: Ratko Yurac B, MD, Spine Surgeon, Professor of Orthopedics and Traumatology, University del Desarrollo (UDD), Clínica Alemana de Santiago, Chile, E-mail: ryurac@gmail.com

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On December 31, 2019, a new strain of coronavirus (SARS CoV-2) was notified for the first time in Wuhan (China). This disease (COVID-19) spread rapidly throughout the world, being declared a global pandemic by the WHO on March 11, 2020 [1], reaching the impressive figures of 24,537,560 cases diagnosed with 832,879 deaths in the world so far [2]. The literature has been growing and diverse in the knowledge about the catastrophic nature of this pandemic, which has undoubtedly strongly affected almost every country in the world.

Each country has established its prevention measures, which include partial or total quarantines in an attempt to flatten the epidemiological curve, with variable results, due to the social, economic and cultural differences of each region. For their part, health personnel have divided into working groups to improve working conditions and try to guarantee medical health coverage for different pathologies, however, the pandemic has saturated most health systems. As a consequence, medical activity has been transversely altered [3,4] and among them, orthopedic surgery is no exception. In our country in particular, local restrictions, notably the suspension of scheduled surgeries, produced a decrease in the surgical resolution of orthopedic pathologies estimated to be more than 90% compared to the same period in previous years.

As a result of this situation, uncertainty has generated as to how our specialty would develop during this context. In spite of a series of international guidelines and recommendations for reducing the risk of contagion in surgeries, together with categorization of patients according to deadlines for performing their procedures [5,6], the risk of infection inherent in hospitalization must also be considered, as well as

the availability of beds in more complex units for a possible postoperative period. On the other hand, it is necessary to consider the possible complications and secondary costs in case of not performing emergency surgeries or when delaying elective procedures due to lack of access to healthcare centers, as these patients may present sequelae, complications and/or disease progression that may require more complex surgeries [7].

In the international literature, a high mortality rate in patients operated on with COVID-19 has been reported, reaching 23.8% in a prospective multicenter cohort of 1,128 patients [8]. However, this information must be analyzed with caution [9]: this study includes surgeries from almost every specialty, with almost 50% of patients older than 70 years. Among the deceased patients, 70.41% were older than 70 years, and 96.63% were older than 50 years, so generalized measures cannot be taken. It is not feasible to compare "scheduled" surgery on a young healthy patient with emergency surgery on an over 70 year-old patient, with multiple comorbidities. By not having a control group of patients with similar characteristics admitted for COVID-19 or patients operated urgently without COVID-19, these results could present a confounding factor, since only one of these conditions may suffice for patients with these demographics to determine their risk of mortality, and not an association of both.

To our knowledge, no studies that establish a percentage of COVID-19 contagion among previously COVID-19-free patients admitted for elective surgery have yet been published. However, if prevention measures recommended in the international literature are taken [10,11], the risk of contagion



could be expected to be low or null in those patients requiring surgeries that cannot be postponed (which does not only involve trauma surgeries). These recommendations include separate flows of respiratory versus non-respiratory patients, pre-hospital measures such as surveys and PCR screening 48 hours before admission, and in-hospital measures like frequent hand washing, use of masks at all times, restriction or suspension of visits to patients, and abbreviated or outpatient hospitalizations. In this regard, we analyzed our case series of patients operated by the Spine Unit during phase 3 of the pandemic (between March and May 2020) following the institutional prevention measures for non-COVID-19 patients, ranging from the pre-hospital phase (which included obtaining SARS CoV-2 PCR as well as IgG and IgM antibodies tests 48 hours before admission), up to an active postoperative follow-up. We did not register COVID-19 infections within 14 days from discharge in 97 procedures: 38 spinal injections (facet and/ or foraminal), 4 rhizotomies and 55 surgeries. Only 3 patients presented a certified COVID-19 infection, at 25, 48 and 69 days after being discharged. We detected no deaths during a mean postoperative follow up of 40 days.

Despite this adverse scenario, orthopedic surgery has adapted with several measures that could even improve the care we give to our patients in the future, such as telemedicine, shorter hospital stays and a longer list of pathologies operated on an outpatient basis. In this list, we must include day surgery for lumbar disc herniations, which in a pre-COVID context was not widely accepted in Latin America, despite having ample support in international literature [12], as it has proven to be a useful practice for us without compromising short-term results.

Today, governments and institutions all over the world suggest resuming elective surgeries [13], which seems right to us, as long as the corresponding sanitary measures are strictly followed, there is local control of the disease as well as sufficient available beds in more complex units in order to avoid their collapse by those patients who would be admitted for elective surgeries.

The pandemic is still evolving, the first peak has not yet been reached in all Latin American countries and future outbreaks are expected, so we must continue developing protocols and workflows that allow us to live with COVID-19 in order to avoid further delays in the resolution of orthopedic and spine pathologies. In this sense, our role as orthopedic surgeons in this pandemic must be an active one, we must use the available tools to continue developing our specialty, but we must keep following prevention measures that seek to protect our patients and ourselves, which do not necessarily imply the total suspension of surgeries. Even though no specific treatment or vaccine for COVID-19 has been confirmed so far to free us from this complex scenario, we still have a lot of work to do.

References

1. World Health Organization (2020). WHO announces covid-19 outbreak a pandemic. [Link: https://bit.ly/35kIGzh](https://bit.ly/35kIGzh)
2. WHO coronavirus disease (COVID-19) dashboard. Geneva: World Health Organization. [Link: https://bit.ly/3h69c1b](https://bit.ly/3h69c1b)
3. Okereke M, Ukor NA, Adebisi YA, Ogunkola IO, Favour Iyagbaye E, et al. (2020) Impact of COVID-19 on access to healthcare in low- and middle-income countries: Current evidence and future recommendations. *Int J Health Plann Manage* 17-21. [Link: https://bit.ly/2DvICB0](https://bit.ly/2DvICB0)
4. Fiorillo A, Gorwood P (2020) The consequences of the COVID-19 pandemic on mental health and implications for clinical practice. *Eur Psychiatry* 63. [Link: https://bit.ly/31Y9Cm5](https://bit.ly/31Y9Cm5)
5. Chhabra HS, Bagaria V, Keny S, Kalidindi KKV, Mallepally A, et al. (2020) COVID-19: Current Knowledge and Best Practices for Orthopaedic Surgeons. *Indian J Orthop* 54: 411-425. [Link: https://bit.ly/321Gpqq](https://bit.ly/321Gpqq)
6. Chang Liang Z, Wang W, Murphy D, Po Hui JH (2020) Novel Coronavirus and Orthopaedic Surgery Early Experiences from Singapore. *J Bone Joint Surg Am* 58: 429-437. [Link: https://bit.ly/2Fb0xh2](https://bit.ly/2Fb0xh2)
7. Meyer M, Prost S, Farah K, Denis J-B, Dufour H, et al. (2020) Spine Surgical Procedures during Coronavirus Disease 2019 Pandemic: Is It Still Possible to Take Care of Patients? Results of an Observational Study in the First Month of Confinement. *Asian Spine J* 14: 336-340. [Link: https://bit.ly/2QXyZ1i](https://bit.ly/2QXyZ1i)
8. Nepogodiev D, Bhangu A, Glasbey JC, Li E, Omar OM, et al. (2020) Mortality and pulmonary complications in patients undergoing surgery with perioperative SARS-CoV-2 infection: an international cohort study. *Lancet* 396: 27–38. [Link: https://bit.ly/3IMCWnD](https://bit.ly/3IMCWnD)
9. Myles PS, Maswime S (2020) Mitigating the risks of surgery during the COVID-19 pandemic. *Lancet* 396: 2-3. [Link: https://bit.ly/2DvJ6XQ](https://bit.ly/2DvJ6XQ)
10. Ministry of Health and Family Welfare (2020) Revised guidelines on clinical management of COVID-19. [Link: https://bit.ly/31ZOFqN](https://bit.ly/31ZOFqN)
11. World Health Organization (2020) Rational use of personal protective equipment for coronavirus disease (COVID-19): interim guidance, 27 February 2020. [Link: https://bit.ly/3bvCqWs](https://bit.ly/3bvCqWs)
12. Jaiswal A, Kumar S, Reddy S, Jaiswal P (2019) Feasibility and safety of outpatient lumbar microscopic discectomy in a developing country. *Asian Spine J* 13: 721–729. [Link: https://bit.ly/2EYMTqU](https://bit.ly/2EYMTqU)
13. Royal College of Surgeons (2020) Recovery of surgical services during and after COVID-19. [Link: https://bit.ly/31OUmjo](https://bit.ly/31OUmjo)

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