Journal Academica Vol. 9(1), pp. 3-6, September 8 2020 - Virology - ISSN 2161-3338
online edition www.journalacademica.org 

*Discussion Note*

# The Efficiency of Ciprofloxacin, Enoxaparin Enodium and Clopidogrel for the Treatment of Patients with Varicose Veins caused by COVID-19: Case Study: Kais, Province of Khenchela (Algeria)

**Boubaker Darbouche[a]*, Abdelhak Darbouche[b]**
[a] Medical Practitioner, Kais (Algeria)
[b] Research Biologist, Hannover (Germany)

Received June 24 2020; Accepted September 4 2020

## ABSTRACT

In full spread of the SARS-COV2, we received no less than four cases of people who had immediate vascular complications likely related to this flu as a result of a proven COVID-19 syndrome. The persons in question had no pathology to explain these arteriovenous phenomena. There was also no disturbance to their biological balance sheets. The treatment of patients with presenting varicose veins caused by COVID-19 under Ciprofloxacin, Enoxaparin Sodium, and Clopidogrel showed a high efficiency.

**Keywords:** COVID-19, SARS-COV2, Ciprofloxacin, Enoxaparin Sodium, Clopidogrel

## INTRODUCTION

The infection of SARS-COV2 is usually carried out by droplet transmission. Under these circumstances, transmission via aerosols is also possible[1,2]. No specific treatment is currently available, as most symptoms can be alleviated; however, some existing antiviral, which are used, for example, against MERS-COV and HIV, may also be effective when infected with SARS-COV-2[3,4,5]. These include protease inhibitors such as Indinavir, Saquinavir, Lopinavir/Ritonavir and Interferon-Beta[6] as well as the RNA polymerase inhibitor Remdesivir.

Chloroquine and Hydroxychloroquine showed promising results in vitro studies in cell culture[7,8,9]. According to a short article from China, Chloroquine has also been used clinically with success[10].

In contrast, a clinical pilot study carried out in Shanghai found no advantage for Hydroxychloroquine over conventional treatment[11]. On the other hand, a clinical study from France came out with positive results[12] but was widely criticized for its methodology[13].

Other numerous scientific institutions have announced further clinical studies[14,15] that Chloroquine and Hydroxychloroquine are part of the provisional Belgian[16,17] treatment[18] and the South Korean guidelines[19] for the treatment of COVID-19. Low-molecular-weight Heparin is recommended for seriously ill COVID-19 patients in order to reduce the risk of thrombosis and

*Corresponding author: Kais544@yahoo.fr

pulmonary Embolism[20]. Due to the high incidence of pulmonary embolism and leg vein thrombosis, the administration of stronger anticoagulant preparations is being considered. Nevertheless, there is still insufficient data on the benefits and risks in this regard. COVID-19 can cause serious cardiovascular complications, including heart failure, heart attacks, and blood clots that can lead to strokes[20].

## TREATMENTS AND RESULTS

In full spread of the SARS-COV2, we received no less than four cases of people who had immediate Vascular complications likely related to this flu as a result of a proven COVID-19 syndrome. The persons in question had no pathology to explain these arteriovenous phenomena. There was also no disturbance to their biological balance sheets.

Among them two young men, one of them is a great sportsman (Patient 1, Age 33), who did not respond to the Non-Steroidal Anti-Inflammatory Drugs (NSAIDs) that were prescribed to him, but he did react well under Ciprofloxacin 500 mg (1x2/7 days) and Lovenox (0.6x2/6 days). This will be called rule of 6, which helped to solve his major lymphedema problem, which we consider to be a vascular problem that probably comes back in the context of the complications of COVID-19.

The second case (Patient 2, Age 41), with no cardiovascular history who was presented 15 days after having an influenza syndrome that forced him to keep the bed (he lives in a mountain region) presented a left Femoro-Popliteal vein thrombosis which extended to the sural veins and the homolateral external saphene vein. Also, when put on Lovenox 0.6x2/6 days 500/7 days, Patient 2 has evolved very well.

The relay by Plavix® 75 mg (Clopidogrel) is introduced according to the rule of 6.

The other two cases we have collected are represented by a left calf hematoma (Patient 3, Age 65) without plausible explanations treated in the same way and who presented an untreated flu in February 2020.

The last case (Patient 4, Age 80), presented calf edema (homans positive) and treated without further delay by the rule of 6 that we considered to be the right method in combination with Ciproflaxin 500 mg, which in our opinion acts on the COVID-19 (further studies will demonstrate the objectivity of our research) both during its digestive passage as well as bronchopulmonary.

The Plavix as relay to the Lovenox is more than essential.

## MEDICINES DESCRIPTIONS

- Ciproflaxin is an antibiotic used in the treatment of bacterial infections. It is also used in treating infections of the urinary tract, nose, throat, skin and soft tissues, and lungs (pneumonia). In our case we have prescribed this antibiotic to prevent bacterial infection which may result after the mating of Sars-Cov2.

- Lovenox (Enoxaparin Sodium) belongs to the low molecular weight heparins. It inhibits a protein molecule (factor Xa) involved in blood clotting. Depending on the level of the dosage, the blood clotting is inhibited to some extent, thus the formation of a blood clot is prevented. During and after surgery, there is an increased risk of formation of such clots (especially in the legs) due to limited physical activity.

- Plavix® (Clopidogrel) is drug belonging to the group of platelet aggregation inhibitors. It prevents the clotting of the blood hence preventing the formation of thrombosis (blood clots), which potentially lead to embolisms, or stroke therefore being life-threatening if left untreated.

## CONCLUSION

This publication is designed to strengthen research and knowledge about the fight against COVID-19. Every medical or scientific intervention could help save lives.

The number of patients with COVID-19 treated in this article is not significant. Nevertheless, the reception of processing information in different countries and region of the world seems more important than ever. Many studies must be undertaken in order to overcome this epidemic.

## REFERENCES


1. Van Doremalen N, Bushmaker T, Morris DH, Holbrook MG, Gamble A, Williamson BN, Tamin A, Harcourt JL, Thornburg NJ, Gerber SI, Lloyd-Smith JO, de Wit E, Munster VJ.. Holbrook (2020). Aerosol and surface stability of HCoV-19 (SARS-CoV-2) compared to SARS-CoV-1. New England Journal of Medicine; 382(16):1564-1567.
2. Brady W J (2020). UVA Health 15-May
3. Xu Z, Peng C, Shi Y, Zhu Z, Mu K, Wang X, Zhu W. (2020). Nelfinavir was predicted to be a potential inhibitor of 2019-nCov main protease by an integrative approach combining homology modelling, molecular docking and binding free energy calculation. doi:https://doi.org/10.1101/2020.01.27.921627
4. Cohen J (2020). Can an anti-HIV combination or other existing drugs outwit the new coronavirus? Science, doi:10.1126/science.abb0659.
5. Liu X, Wang X-J (2020). Potential inhibitors for 2019-nCoV coronavirus M protease from clinically approved medicines. In: bioRxiv. doi:10.1101/2020.01.29.924100
6. Paules CI. Marston HD, Fauci AS (2020). Coronavirus Infections More Than Just the Common Cold. In: Journal of the American Medical Association, doi:10.1001/jama.2020.0757,PMID 31971553.
7. Notes on detection, diagnosis and therapy of COVID-19 patients (2020). Permanent working group of competence and treatment centres for diseases caused by highly pathogenic agents. (STAKOB). Office at the Robert Koch Institute (Germany).
8. Wang M, Cao R, Zhang L, Yang X, Liu J, Xu M, ZShi, Hu Z, Zhong W, Xiao G (2020). Remdesivir and chloroquine effectively inhibit the recently emerged novel coronavirus (2019-nCoV) in vitro. Letter to the Editor. In: Cell Research. Volume 30, February 4, doi:10.1038/s41422-020-0282-0.
9. Yao X, Ye F, Zhang M, Cui C, Huang B, Niu P, Liu X, Zhao L, Dong E, Song C, Zhan S, Lu R, Li H, Tan W, Liu D (2020). In Vitro Antiviral Activity and Projection of Optimized Dosing Design of Hydroxy- chloroquine for the Treatment of Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2). In: Clinical Infectious Diseases. Volume 9, doi:10.1093/cid/ciaa237, PMID 32150618 (pre-print).
10. Liu J, Cao R, Xu M, Wang X, Zhang H, Hu H, Li Y, Hu Z, Zhong W, Wang M (2020). Hydroxychloroquine, a less toxic derivative of chloroquine, is effective in inhibiting SARS-CoV-2 infection in vitro. In: Cell Discover. Volume 6, doi:10.1038/s41421-020-0156-0.

11. Gao J, Tian Z, Yan X (2020). Breakthrough: Chloroquine phosphate has shown apparent efficacy in treatment of COVID-19 associated pneumonia in clinical studies. Letter. In: BioScience Trends. Volume 14, No. 1, 29. February, doi:10.5582/bst. 2020.01047.
12. Jun C, Danping L, Li L, Ping L, Qingnian X, Lu X, Yun L, Dan H, Shuli S, Dandan Z, Zhiping Q, Tao L, Yinzhong S, Hongzhou L (2020). A pilot study of hydroxychloroquine in treatment of patients with common coronavirus disease-19 (COVID-19). Journal of Zhejiang University (Medical Sciences). Volume 49, No. 1, doi:10.3785/j.issn. 1008-9292.
13. Gautret P, Lagier JC, P, Hoang, Meddeb, Mailhe M, Doudier, Courjon, Giordanengo V, VE, HT, S, Colson , Chabrière , La Scola , JM, Brouqui, Raoult : (2020). Hydroxychloroquine and azithromycin as a treatment of COVID-19: results of an open-label non-randomized clinical trial. International Journal of Antimicrobial Agents, doi:10.1016/j.ijantimicag. 105949.
14. Böck H (2020). About that Hydroxychloroquine for COVID-19 trial. In: Better Science. March 23.
15. Chloroquine Prevention of Coronavirus Disease (COVID-19) in the Healthcare Setting (COPCOV) (2020). Clinical Trials. gov. U.S. National Library of Medicine.
16. McPhee S (2020). 'Cure' found for coronavirus in Australia. In: The Chronicle.
17. Institute of Tropical Medicine, University of Antwerp, UMC Sint-Pieter, Sciensano, Federal Agency for Medicines and Health Products (HRSG) (2020). Interim Clinical Guidance for Patients Suspected of/Confirmed with COVID-19 in Belgium. Version 4 (wiv-isp.be).
18. Sung-sun K (2020). Physicians work out treatment guidelines for coronavirus. In: Korea Biomedical Review.
19. David A. Berlin, M.D., Roy M. Gulick, M.D., M.P.H., and Fernando J. Martinez, M.D. (2020). Severe Covid-19. NEJM, doi:10.1056/ NEJMcp2009575.
20. Dominic Wichmann et al. (2020). Autopsy Findings and Venous Thromboembolism in Patients With COVID-19: A Prospective Cohort Study. Ann Intern Med. 2020 Aug 18; 1 73(4):268-277. doi:10.7326/M20-2003. Epub 2020 May 6.