

**FEEDBACK on the treatment of SICK PATIENTS SUSPECTED OF SUFFERING FROM COVID 19  
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Following my communication of March 26, 2020 concerning patients with suspected severe Covid-19 (group II), you will find below graphs showing the evolution of the symptoms of the 24 patients who displayed a moderate form of atypical influenza-like syndrome (group I), and whom I thought would still benefit from treatment and close monitoring:

The criteria for initiating treatment are as follows: Duration of evolution greater than 5 days, persistent dry cough, dyspnea, marked general symptoms, prolonged fever, relapse of cough after a semblance of healing in the 2nd week between Day7 and Day10 ... Respiratory and cardiovascular risk factors, autoimmune disease, cancer. Smoking, overweight. Allergic terrain. Social context.

Patients all received at least one Macrolide (Zithromax, Zeclar, Rulid or Josacine) and in cases with poorly tolerated pneumopathy, a combination with C3G (CEFTRIAXONE) or Cefpodoxime.

I prescribed the macrolide alone to patients in whom I observed the existence of a bronchial syndrome with atypical, bilateral pneumonia, with a reduction of the vesicular murmur and dyspnea, and a C3G in addition in the event of marked ENT signs or low pulmonary infections, acute frank lobar. Because we observed during this flu syndrome an attack of the entire respiratory tree at different levels.

We followed patients every day and noted the state of the symptoms, at the start of the disease, on the day of the initiation of treatment (noted T) and during the 3 following days (T1, T2, T3). The symptoms studied are cough, fever, dyspnea, asthenia, digestive disorders, headache and ENT signs (sore throat, nasal obstruction, anosmia and ageusia).

**GRAPH –COUGH GROUP ONE**

After initiating treatment at time T, the cough disappears rapidly gradually: 50% of patients no longer have a cough within 24 hours, and no one complains of a cough after 72 hours. The fight against this symptom contributing to the reduction of the risk of contagion via the projection of droplets.

### **GRAPH – FEVER GROUP ONE**

Moderate fever is observed before treatment. It normalizes within 48 hours with treatment.

### **GRAPH – INTENSE DYSPNEA EXERTIONAL GROUP ONE**

The main symptom being shortness of breath, there is, soon after the initiation of treatment, a rapid improvement in dyspnea exertional.

### **GRAPH – ASTHENIA GROUP ONE**

Within barely 24 hours of treatment, fatigue decreases markedly, most patients improving to a much better general condition.

### **GRAPH – ORL GROUP ONE**

ENT signs such as sore throat or nasal blockage decrease very strongly 48 hours after the start of treatment.

### **GRAPH - DIGEST f GROUP ONE**

Patients with initial digestive disorders such as febrile abdominal pain, septic syndrome, diarrhea or vomiting, received: - Either a fluoroquinolone more focused on colic symptoms. - Or a macrolide if they had secondary respiratory signs after the digestive crisis had passed.

### **GRAPH - HEADACHES GROUP ONE**

Headaches present in 1/3 of patients disappear in just 24 hours of treatment in 3 out of 4 patients and in all patients in 3 days.

### **GRAPH - MYALGIAS GROUP ONE**

Almost 50% of patients had muscle or joint pain. Myalgia being a warning sign in patients, associated with a decline in general condition, and frequently with anxiety, gives way within 48 hours with treatment.

Various points:

- 1) It should be noted that patients were not all treated at the same stage of the disease (between D5 and D 20)
- 2) It is remarkable that the patients presented many symptoms which all yielded in the same 48-hour timeframe, which therefore rules out the hypothesis of a simple natural elimination of the virus in this healing process.
- 3) The patients for whom we have the longest perspective no longer have symptoms.
- 4) I used 4 different macrolides, and did not notice any difference in effectiveness, but only in digestive tolerance

Conclusion:

Covid-19, this coronavirus from the Orient which has been occupying us for several months all over the World, generates anxiety among billions of confined individuals, causes considerable human and economic damage, even in developed countries which did not see the impending disaster. This communication from a general practitioner was not premeditated, especially in these times when we are overworked. It was made on an emergency basis because it should not be kept for one's self.

Even in a very unacademic way, it seemed important to me, in this very particular context, to share with my colleagues as soon as possible the good results of an empirical treatment for a very contagious disease, still poorly understood and leading to sometimes serious and fatal atypical pneumonia. This clinical study shows the rapid response of patients highly suspected (of suffering from) covid 19 to a very simple protocol: taking a macrolide given alone in group I or combined with a C3G in group II, which seems, on the one hand, to stop the deterioration caused by the disease, and on the other hand, to effectively treat all its symptoms within 24 or 48 hours.

It is surprising and raises many questions.

Indeed, it would be interesting to know if the macrolide also has a moderate virucidal activity, in addition to its activity against bacterial superinfection and the inflammation which results from it. Zithromax was the subject of Japanese research in October 2019 which proved its virucidal action on the

H1N1 virus, with a good description of its fighting mechanism against intracellular infections.

<https://pubmed.ncbi.nlm.nih.gov/31300721/>

Would this anti-viral activity also apply to the coronavirus?

It would be interesting to understand if certain macrolides do indeed have virucidal properties, if some would be more effective than others, or if it is simply a class effect. This last hypothesis seems to be confirmed given the equivalence of effectiveness on symptoms when the molecules are varied.

Which would have the advantage of sheltering from a possible shortage of macrolide drugs if they were in high demand.

It should be determined whether antibiotic treatment should be continued as long as viral shedding persists. A minimum treatment period of 10 to 14 days seems indicated to avoid a relapse of these atypical pneumonia.

To this day, it is very reassuring to note that all the patients I have seen with these symptoms responded to the Macrolide alone (group I) or Macrolide-C3G protocol for severe forms (group II). (About forty patients as of March 28, 2020 and their number continues to grow). The current pandemic and the upcoming epidemic peak in our country necessitate a quick reaction to avoid hospitalizations, and overcrowding of hospitals.

Given:

1 / the relative safety of macrolides and cephalosporins, old and well-known drugs, obviously while respecting contraindications,

3 / their easy access in urban medical facilities or Hospitals,

4 / pending validated, safe or innovative active molecules and a vaccine

5 / the benefit-risk ratio being clearly favorable,

6 / when hydroxychloroquine is not possible in certain patients or poorly tolerated

6 / it would probably be beneficial to provide it without delay to people affected by this virus, especially the most vulnerable, the elderly, who are unfortunately adjustment variables in this period of pandemic.

I did not test injectable forms of macrolides (Erythromycin, Rovamycin), which could be useful for the elderly or dependents. This simple drug is certainly not the first envisaged in hospitals accustomed to using molecules with a wider spectrum, but it could find its place in this epidemic context.

It would be important for other colleagues engaging in this approach to apply this protocol and communicate their results to support this analysis. The risk for patients is low, however the expected benefit is significant in the absence of validated specific treatment for covid-19. Because it is obvious that the procedures initiated by the authorities entail delays which are not adapted to the urgency of the situation on the ground, which requires solutions which can be applied immediately.

And this, to avoid losing an opportunity and save human lives as we start to see active treatments.

Prospective studies should be undertaken, by testing patients in nursing homes or hospital facilities and would, I hope, confirm these good results and strengthen the hope they generate.

With my respectful and devoted greetings.

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