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Therapeutic support protocol for patient with dysosmia with or without dysgeusia related to the SARS-CoV2 virus infection

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To the Editor,

Early 2020 has been characterized by a rapid expansion of a severe pulmonar interstitial pathology caused by a new viral strain from the SARS related coronavirus species, SARS-CoV2. This pathology has rapidly affected all the world.

The mainly clear symptoms are: fever, cough, dyspnoea, myalgy, artralgy, headache, diarrhea and sore throat. But the spread of the disease has also manifested an atipic symptomathology: "olfactory and gustatory dysfunction" (1,2).

Preliminary studies have been carried out to evaluate the correlation between symptoms related to olfactory and gustative disfunction and the coronavirus disease (2,3).

Our experience wants to examinate patients whose symptoms "dysosmia and dysgeusia" have not been recovered 15 days after healing of all the other symptoms related to the covid-19 syndrom.

Patients were invited to participate and the informed consent was obtained.

This study has been conducted over a period of time ranging from the 27th February 2020 to the 30th April 2020.

The sample of patient in the study has been selected using these inclusive criteria:

A) Persistance of symptoms of severe disorders of olfactory and gustative senses over 15 days from the healing of the covid-19 syndrom;

B) Positivity to the Ab anti CoVID-19 IgG (Test HKB Tecnobiogenetics);

C) Lack of other pathologies or infections that can cause an inflammatory state of the nasal mucose.

Patients that resulted positive to the Ab anti CoVID-19 IgM were not included in this study.

The nCOVID-19 IgG and IgM POCT kit is an immunologic test for qualitative determination of the antibodies IgM/IgG anti SARS-CoV2 into human serum, plasma or whole blood.

19 patients (10 male and 9 female) - between 23 and 64 - have been evaluated. Two male subjects have been excluded. The remaining 17 patients (8 male and 9 female) presented dysosmia and dysgeusia without other associated symptoms on linear evaluated scale of 0 (4).

We compared the neurosensorial damage of the "olfactory nerve" from SARS-CoV2 to the viral damage of the acustic nerve that causes sudden hearing loss.

We have changed the therapeutic protocol used for sudden hearing loss (Tab. 1).

The rationale behind the therapy is founded on the currently known effects caused by the virus as an abnormal inflammatory response and the formation of microthrombi.

After 7 days of therapy, we conducted a new subjective evaluation of the symptoms, a follow up after 30 days from the start of the therapy (Mesoglicane and Multivitaminic Supplement with high zinc intake), and a final subjective evaluation.

In order to obtain a rapid evaluation of symptoms, we opted for a subjective system based on the method

Table 1. Therapeutic Used Protocol

Therapeutic Used Protocol	
Corticostiroid or FANS	Phosphate Dexamethasone 8 mg/die for 7 days or Ketoprofene Lysine 160 mg/die for 7 days
Heparin Antithrombotic	Mesoglicane 30 mg/die i.m for 7 days or Sulodexide: 600 ULS/die for 7 days
Oral Diuretic with Carbonic anhydrase inhibitor	Acetazoplamide: 250 mg/die for 7 days
Multivitaminic Supplement with high zinc intake	For 7 days
Hydroxychloroquine: 200mg/12 ore	For 7 days
Proton pump inhibitor	For 7 days
Oral Therapy at home for 30 days	
Heparin Antithrombotic	Mesoglicane 50 mg/die: 1 cp die or Sulodexide: 250/ULS/12 hours
Multivitaminic Supplement with high zinc intake	1 cp die

used in the visual analog scale (VAS) (4). We used a linear evaluation range from 0 to 10, where 0 corresponds to complete lack of the examinated sense and 10 is the normal sensibility.

Patients evaluated their impressions indicating a final numeric figure which simultaneously matched the evaluation of how much the lack of taste or smell had affected their daily quality of life.

After the end of therapeutic protocol, 9 patients assessed their recovery indicating a score of 9 out of 10 for smell and 10 out of 10 for taste, 7 patients indicated a score of 8 out of 10 on both senses and only a patient indicated 7 out of 10 for smell and 4 out of 10 for taste.

Our experience wanted to highlight the possibility to achieve a support therapy for patients affected by dysosmia and disgeusia after SARS-CoV2 infection.

The main topics this study analyses are:

- the use of known and validated therapeutic protocol (modified for the CoVid-19 disease) in the treatment of iposmy/anosmy with or without ipogeusy/disgeusy for a pathology with similar etiology involving a cranial nerve

- the timing related to the beginning of the therapeutic protocol, started over two weeks from the initial symptoms, so that the chance of recovery of the affected nervous function was less probable

Conflict of interest: Each author declares that he or she has no commercial associations (e.g. consultancies, stock ownership, equity interest, patent/licensing arrangement etc.) that might pose a conflict of interest in connection with the submitted article

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