Long COVID with Hyperinflammation

Dr Ina Chammah (Brunswick, Germany)

Introduction

Early in the Corona pandemic, it quickly became apparent that severe courses of COVID-19 were closely associated with immune system dysregulation and aberrant and uncontrolled release of proinflammatory mediators, such as interleukin 1 (IL-1), interleukin 6 (IL-6), and tumor necrosis factor alpha (TNF-α). These disorders, known as cytokine storm and hyperinflammation, respectively, usually manifest clinically as systemic inflammation and multiorgan failure[1].

Persistent inflammation after SARS-CoV-2 infection also appears to play a role in some patients with Long/post-COVID syndrome and to promote the onset of symptoms such as headache, limb pain, and fatigue, among others[2].

In the literature it is suggested that especially overactivated mast cells are responsible for the derailed inflammatory processes[3].

Therapeutic options (including micro-immunotherapy, phytotherapy) for hyperinflammation and associated COVID-19 long-term sequelae are presented on the basis of a case report below.

Patient case

This concerns a 59-year-old patient with long-standing elevated liver enzymes, whom I already treated in 2018 for a reactivation of cytomegalovirus (CMV) with the micro-immunotherapy formula CMV over a period of 4 months. His liver values improved during the therapy. As a positive effect, his energy improved and he did not come back to my practice for several years as he felt healthy and able to perform.

Medical history (March 28, 2022)

He contacts me by phone on March 28, 2022, as he continues to suffer from severe symptoms 4 weeks after his acute SARS-CoV-2 infection:

> "I keep having fevers, chills, alternating with sweats, palpitations, and a severe cough. I am terribly tired and have a headache. I've been in bed for three weeks."
>
> *Note: A pulse oximeter was not at hand.*

He reports that he saw his primary care physician 8 days ago, who could not find any abnormalities in the lungs and sinuses and suspected whooping cough. He prescribed the following treatment for the patient:

- Amoxicillin (1000 mg - 2x daily for one week).

This medication only improved the earache he had been suffering from the previous week.

He has not been vaccinated against coronavirus and has no history of chronic disease.

Treatment (March 28, 2022)

I prescribe the following treatment:

- Dexamethasone (4 mg - 1x daily for a period of 10 days).
- Salbutamol inhalate (2x daily).

Follow-up

The coughing fits, headaches, and fatigue improve significantly in the following days. The oxygen saturation can be determined after a few days and remains stable at 98%.

However, after discontinuing Dexamethasone, the old symptoms reappear.

Symptoms (April 10, 2022)

The patient reports the following complaints: severe depressive mood with anxiety, coupled with weakness, sleep disturbances, headaches, and painful coughing. The oxygen saturation drops to 93% with a resting heart rate of 103 beats per minute.

Treatment (April 10, 2022)

The following treatment is initiated:

- Bryonia C30 (3 individual doses on the 1st day)
- Bryonia C200 (3 individual doses on the 2nd day)
- Procaine (60 mg - once daily)
- Quercetin (500 mg - once daily)

Follow-up

After 2 days, there has been no improvement.

Symptoms (April 12, 2022)

In addition, there are renewed episodes of sweating, fever, difficulty swallowing, and sore throat.

Treatment (April 12, 2022)

Based on the patient's course, I assume that he is suffering from **persistent hyperinflammation.** The administered cortisone has helped to temporarily reduce the inflammatory response, but it is necessary to sustainably regulate the imbalanced immune system. In particular, influence should be taken on the signaling pathways of IL-1, IL-6, and TNF-α through specific inflammation-regulating micro-immunotherapy.

The therapy plan is therefore adjusted as follows:

- Micro-immunotherapy formulas INFLAM and ARTH (2 capsules/day; in case of improvement of the symptoms, the dosage will be reduced to 1 capsule/day for approximately 20 days)*
- Dexamethasone (2 mg/day - once a day for the first 5 days; afterwards gradual reduction of the dosage every 2 days by 0.5 mg)
- Procaine (60 mg - once a day)
- Quercetin (500 mg - once a day)

**Note: The intake of micro-immunotherapy should be distributed throughout the day. A minimum of 2 hours should elapse between each intake.*

Subsequent course

After one week, the patient is only taking 1.0 mg of dexamethasone.

There is no more fever and his symptoms have significantly improved: he is less tired, only sweats at night in the armpit area, enjoys better sleep quality, no longer has headaches, and only coughs lightly in the morning. After another 2 weeks, no medication is necessary and he is fully able to work again.

Conclusion

In my practice, recommending natural remedies, homeopathic medicines and micro-immunotherapy has often had a positive impact on the course of COVID-19 infection and Long/Post-COVID syndrome. For some patients - as in the presented case report - it was necessary for a corticosteroid treatment to accompany my regulatory procedures. Experience from my practice has shown that it is important to gradually taper off medication like Dexamethasone. Inflammation-regulating treatments like micro-immunotherapy can be helpful in avoiding a reappearance or worsening of symptoms when discontinuing conventional medical treatment and providing long-term help to the patient. The following figures summarize various therapeutic options for hyperinflammation and provide an overview of the preferred micro-immunotherapy medicines.

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Treatment options in case of hyperinflammation

Inflammation-regulating or anti-inflammatory treatments

Micro-immunotherapy	Phytotherapy	Hormone therapy	Conventional medicines
- Formula ARTH **- Formula INFLAM** **- Other micro-immuno-therapy formulas (e.g. formula DEP, MIREG)**	- Artemic Rescue - Quercetin (500 mg) - Black cumin oil	- Melatonin (30-80 mg)	- Dexamethasone (4-6 mg for 10 days) - Procluster (Procaine) (60 mg) - Ivermectin (24-36 mg for 3-5 days)

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Other treatments, depending on the clinical condition of the patient and the findings of the cause-oriented diagnosis (e.g. antihistamines, mast cell stabilisers in case of mast cell activation syndrome, antiviral micro-immunotherapy in case of virus reactivation)

Fig. 1: Treatment options in case of hyperinflammation

Treatment options in case of hyperinflammation

Inflammation-regulating or anti-inflammatory treatments

Formula ARTH

Formula INFLAM

Fields of application

Uncontrolled inflammation and associated diseases (e.g. muscular and articular pain, headache, general malaise, mild fever or dysthermia, thrombosis)

Pre-existing conditions associated with chronic inflammation (e.g. obesity, diabetes, autoimmune diseases)

Dosage

Acute conditions: 3-4 capsules / day until symptoms improve.

Maintenance therapy: 1 capsule / day for 3-6 months.

Note: The formulas ARTH and INFLAM are frequently combined in daily clinical practice. In this case, a maximum of 1-2 capsules / day of each formula should be administered.

Immunoregulatory objectives

- Reduce inflammation and relieve pain.
- Limit tissue damage and loss of function.
- Avoid transition to chronicity.

- Reduce inflammation and relieve pain.
- Promote anti-inflammatory signal-ling pathways.
- Limit harmful metabolic effects of chronic processes.

Fig. 2: Micro-immunotherapy in inflammation

Note: In specific cases, there are additional inflammation-regulating micro-immunotherapy formulas available, such as the formula DEP for neuroinflammation and disorders of tryptophan metabolism, or the formula MIREG for inflammation associated with mitochondrial disorders.

References

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