

## COVID-19 Related Cheilitis Treated with Clobetasol Ointment: Two Case Reports

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### ABSTRACT

#### INTRODUCTION

Coronavirus disease 19 (COVID-19) is known to cause or trigger different skin manifestations, as well as mucocutaneous symptoms like cheilitis.

Cheilitis is accompanied by discomfort and pain, why topically treatment with a potent steroid like clobetasol ointment could offer a therapeutic option.

#### MATERIAL

During November 2020, all patients at an intensive care unit were screened for COVID-19 related cheilitis.

#### RESULT

Two elderly patients were found. Both patients had severe cheilitis which partially cleared on clobetasol ointment.

#### CONCLUSION

Cheilitis is a known manifestation of COVID-19 and symptoms can be relieved by the use of clobetasol ointment.

#### KEYWORDS

COVID-19; Cheilitis; Clobetasol ointment

#### INTRODUCTION

Coronavirus disease 19 (COVID-19) is an infectious disease mainly affecting the mucosal epithelium lining the respiratory system. However, the disease is affected

with manifestations in many organs. Among many affected organs, it presents numerous skin manifestations including urticaria, morbilliform rash, livedo reticularis and pernio [1,2]. Further, lesions involving the oral mucosa and lips have been reported and seem in some

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cases to be the first presentation of COVID-19 [3-5]. Among the oral lesions, cheilitis has been reported as a complication to COVID-19 disease [6]. However, the extent of the condition has only been sparsely investigated and the association may be underreported.

This paper report clinical findings and disease course of cheilitis in two seriously ill COVID-19 patients at an intensive care unit.

## MATERIAL

During November 2020, all patients at the intensive care unit at Landeskrankenhaus Melk were screened for cheilitis lesions. For patients with cheilitis, symptoms and prescribed treatment were reported according to a standardized table.

Age (year) and gender	Comorbidities	Prescribed non-dermatological, non-COVID-19 treatments	Time since from first COVID-19 symptoms before cheilitis (days)	Duration of cheilitis at baseline dermatology visit (days)	Time of intubation since first COVID-19 symptoms (days)	Microbiology in tracheal secretions	Prescribed systemic treatment for COVID-19	Prescribed dermatological treatment	Duration of dermatological symptoms (days)
Patient 1									
70, female	Arteriel hypertension, adipositas, hypercholesterolaemia, hypothyreosis	Pantoprazole, aliskiren, levothyroxine, nebivolol hydrochloride, colecalciferol, rosuvastatin		2	10	Candida albicans	Dexamethasone	clobetasol ointment	10
Patient 2									
81, male	Arteriel hypertension,	Clodipogrel, lisinopril		3	2	Candida albicans	Dexamethasone	clobetasol ointment	7

**Table 1:** Patient characteristics, skin symptoms and prescribed dermatological treatment.

## RESULTS

Two patients were found.

The first patient was a 70-year-old woman (Table 1) (Figure 1). She was admitted to the medical ward due to dyspnea, tiredness and malaise. An initial nasal polymerase chain reaction (PCR) test for COVID-19 was negative. A peripheral pulmonary embolism was detected in a computer tomography (CT) scan. Further, a duplex scan was carried out and thrombosis was found in the left popliteal vein. A treatment with apixaban was started. Some days later, dyspnea worsened, and fever rise to 38.5 degree Celsius. The COVID-19 PCR test was repeated and now found to be positive. Because of progressive dyspnoea, the patient was transferred to the intensive care unit and got intubated. Angular cheilitis and stomatitis (Figure 1) could be detected after the course of a few days. No herpetic blisters or other herpetic lesions could be found, however, *Candida albicans* was found in the tracheal secretion, but its clinical relevance was not considered of significance. Therefore, topical treatment with clobetasol ointment twice daily on the lips was started and lead to a rapid

improvement. The patient was discharged without skin symptoms two weeks after she was admitted.



**Figure 1:** Female patient with angular cheilitis.

The second patient was a 81-year-old man (Table 1) (Figure 2). He was directly admitted to the intensive care unit for intubation due to massive dyspnea and a positive nasal COVID-19 PCR test. *Candida albicans* was found in the tracheal secretion, but its clinical relevance was not considered of significance. He developed a necrotic cheilitis after some days (Figure 2). Topical treatment with clobetasol ointment twice daily was started and symptoms were reduced. Unfortunately, the patient died within another week due to progressive cardiac failure.



**Figure 2:** Male patient with severe necrotizing cheilitis of the lips.

## **DISCUSSION**

Mucocutaneous manifestations in relation to COVID-19 is reported, as well as Kawasaki like syndromes, even in adults [7]. It remains a question if the COVID-19 infection is the causative factor or if the compromised immune system - as well as the immunomodulatory treatment - leads to the oral manifestations. The role of *Candida albicans* remains unclear in the presented cases. However, the topically treatment with clobetasol ointment led to clinically improvement in both patients. Most common local factors such as irritants, allergens and infections play a role in the development of cheilitis [8]. However, further investigation is needed to explore if *Candida albicans* at least is a triggering factor. Further,

potent topical corticosteroids are used in the treatment of oral graft versus host disease and other mucosal conditions such as oral lichen planus [9].

The use of topically steroids, even high potent agents as clobetasol ointment, is suggested as a treatment option for COVID-19 patients with mucocutaneous symptoms like cheilitis. Screening for fungal infection is warranted and prophylactic treatment with antifungal agents could be considered in severe cases.

## **CONCLUSION**

COVID-19 can present many skin conditions, cheilitis among others. Symptomatic treatment with potent topical corticosteroids seems well tolerated. Screening for fungal infection is warranted as fungal infection is a side effect of topically used steroids, however, the role of it in the development of the mucocutaneous conditions remains unclear.

## **CONFLICTS OF INTEREST**

Both authors declare no conflicts of interest.

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