

# Low incidence of COVID-19 in hidradenitis suppurativa: How to interpret it?

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## 1. Introduction

The onset of COVID-19 pandemic has become a public health emergency of international concern and several works has pointed out the crucial role played by a cytokine storm in the development of severe forms of COVID-19. Interestingly, as hidradenitis suppurativa (HS) is a chronic inflammatory skin disease mediated by key cytokines as TNF- $\alpha$  and IL-17 among others, we were wondering if HS patients do represent a high-risk group for COVID-19. As reported in the retrospective study of Marzano et al. in a cohort of 316 patients, they found a low prevalence of COVID-19 of 1% and all patients had mild symptoms of COVID-19. In order to better assess the risk of COVID-19 in HS and to better characterize HS patients who contracted COVID-19, we conducted the first prospective observational pilot study covering the period from March 2020 to February 2021.

## 2. Materials and methods

We collected prospectively data from Belgian HS patients at three time points (03/2020, 10/2020 and 03/2021) in order to cover the first whole pandemic period. All the patients were recruited from our tertiary-HS clinic at Erasme Hospital in Brussels.

## 3. Results

We collected data from 135 HS patients and 8/135 (5,9%) developed mild COVID-19 symptoms and none of them suffered from severe forms COVID-19.

**Table 1.** Characteristics of HS population

	COVID- (N = 127)	COVID+ (N = 8)
Age (mean $\pm$ standard deviation, years)	39.2 $\pm$ 11	30.3 $\pm$ 7.4
Gender (%)	F : 62.2 / M : 34.6	F : 87.5 / M : 12.5
Ethnicity (%)		
North European	65.2	50
Other	33.1	50
BMI (mean $\pm$ standard deviation, kg/m <sup>2</sup> )	28.9 $\pm$ 6,9	30,6 $\pm$ 6,7
Smoking (%) : Yes	71.7	37.5
Alcohol (%) : Yes	72.9	37.5
Respect of COVID-measurements (%) : No	7.4	12.5

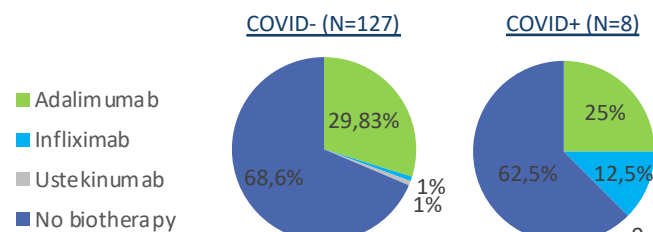
## 4. Discussion

We observe a low incidence of SARS-CoV-2 infection in patients with HS in our cohort as reported by the works of Marzano et al. Studies conducted in rheumatic and inflammatory bowel diseases showed also reassuring data with no increased risk of COVID-19 in their large cohorts. Importantly, the use of biotherapies does not seem to increase this risk and may play a protective role against the cytokinic storm associated to COVID-19 severity. Intriguingly, important comorbidities as metabolic disease and cardiovascular disease which are more prevalent in HS population were not associated with a higher risk of COVID-19.

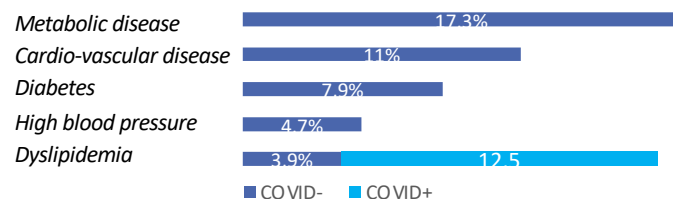
## 5. Conclusion

Our preliminary data let us suggest that HS and associated comorbidities do not represent an increased risk to develop COVID-19 and the use of biotherapies during the pandemic seems to be safe. Future studies are mandatory to confirm our observations in a larger cohort and at an international level.

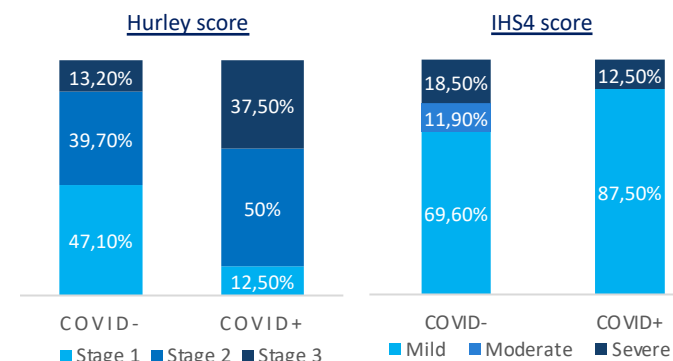
**Graph 1.** Treatment of HS population



**Graph 2.** Comorbidities



**Graph 3.** Disease severity



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