



Poster N°: 1025

Titre : Smoking status and COVID-19 in a regional hospital in Tunisia

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Introduction:

According to the WHO, smoking remains the leading cause of preventable morbidity and mortality worldwide. Furthermore, in this pandemic period, evidence has emerged regarding the impact of smoking on the risk and severity of COVID-19. Therefore, controlling this factor must be a top prevention priority.

Objective:

Our aim was to determine severity and mortality among COVID-19 patients stratified by smoking status (current/former smokers compared with never smokers).

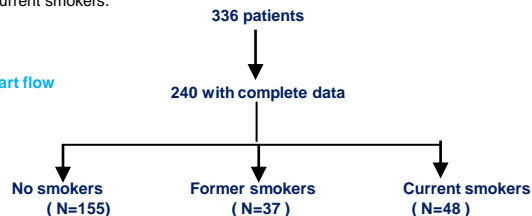
Methods:

It was a retrospective study conducted among patients admitted for COVID-19 in general medicine department at the regional hospital of M'saken from March 2020 to August 2022. We have considered smokers as all patients currently smoking or have quit smoking.

Results:

- A total of 336 patients were admitted. Only 240 participants were with complete data. Among them, two third (65%) were no smokers. The remaining were distributed in 37 former smokers and 48 current smokers.

Figure 1 : Chart flow



- Mean age was almost similar at 65.70±14.89 years in the smokers and 62.25±15.21 in no smokers. Majority of smokers (94.1%) were men however majority of no smokers were females (75%).

Figure 2: Distribution of smoking patients by gender

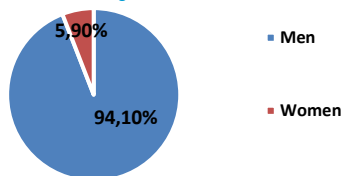
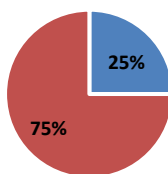


Figure 3: Distribution of no smokers by gender



- Only 24 (10%) of hospitalized patients were vaccinated: 14.3% (12/85) among smokers and 7.7% (12/155) among non-smokers.

Figure 4: Distribution of smokers by vaccination status

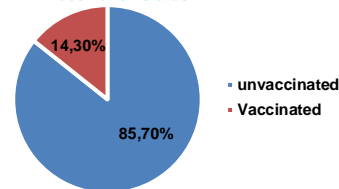
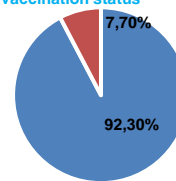


Figure 4: Distribution of smokers by vaccination status



- Comorbidities were similar in both groups (61.3% in the nonsmokers versus 60% in the others). Severe forms were nearly equally distributed between smokers and non-smokers (70.6% vs 65.8%).
- Among smokers 35.7% had high level of troponin versus only 16.1% within non-smokers (p=0.006, OR=2.88).

Table I: Association of smoking and troponin level

	Smokers	Non-Smokers	p	OR
Troponin level	35,7%	16,1%	0,006	2,88

- Mortality was higher in smokers 12.9% versus 7.7% in nonsmokers without significant difference (p=0.251).

Table II: Association of smoking and mortality

	Smokers	Non-Smokers	p
Mortality	12,9%	7,7%	0,251

Discussion:

A systematic review by Vardavas et al.[1] and a meta-analysis by Reddy et al.[2] had concluded, based on the limited available data, that smoking is most likely associated with worse outcomes and progression in COVID-19 and that patients with a history of smoking were vulnerable to severe COVID-19. In addition, an observational study from Britain had supported the causal effect of smoking on the risk of severe COVID-19 [3].

Conclusion:

This work studied the association between COVID-19 and smoking. But as other studies have shown, the evidence was low quality for an association between smoking or having smoked and disease severity in patient hospitalized with COVID-19.

References : 1. Vardavas CI, Nikitara K. COVID-19 and smoking: A systematic review of the evidence. *Tob Induc Dis.* 20 mars 2020;18:20. 2. Reddy RK, Charles WN, Sklavounos A, Dutt A, Seed PT, Khajuria A. The effect of smoking on COVID-19 severity: A systematic review and meta-analysis. *J Med Virol.* févr 2021;93(2):1045-56. 3. Smoking and COVID-19 outcomes: an observational and Mendelian randomisation study using the UK Biobank cohort | *Thorax [Internet]*. [cité 31 oct 2022]. Disponible sur: <https://thorax.bmj.com/content/77/11/65>