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RESEARCH ARTICLE

MASK ACNE DURING COVID19: CASE SERIES

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Abstract

The utilization of a face mask is a necessity during the SARS CoV2 pandemic. The occlusion associated with prolonged daily use can lead to physiological changes in the skin, resulting in irritation, itching and infection. This may lead to exacerbation of pre-existing dermatoses or induction of irritant dermatitis or bacterial folliculitis.We are reporting in this study a case series, aiming to explore the prevalence and possible risk factors for preventing face mask-related acne.

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Introduction:-

Wearing a face mask helps prevent the spread of the virus by preventing dispersal of droplets during talking, sneezing and coughing and leads to a decrease in the number of cases of covid19.

Mask acne was invented during the COVID-19 pandemic, to designate acne related to wearing a mask, refers to mechanical acne, previously described in health professionals, but currently generalized to all the population. [1]

However, long-time mask wearing could increase the flare of acne due to higher temperature and humidity on the surface of facial skin caused by expired air and the perspiration. [2]

We present a retrospective study of acne mask cases from our dermatology department,aiming to explore the prevalence and possible risk factors for preventing face mask-related acne.

Methods:-

This retrospective study was carried out over a period of 5 months, ranging from December 2020 to April 2021, collecting 20 cases of acne secondary to wearing a mask in our dermatology department.

The exclusion criteria were patients with facial dermatoses other than acne.

A standardized questionnaire was developed and the severity of acne was judged according to the recommendations of SDF 2015.

The data were analyzed with the software Epi-info version 3.5.1.

Results:-

A total number of twenty cases were collected, including 6 males and 14 females with a sex ratio of 0.42. The average age was 23.50 years, ranging from 20 to 27 years. Health professionals represent 65% of cases.

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The patients had a history of hyperseborrhea in 6 cases (30%), acne in 3 cases (15%), both in 6 cases (30%) and none in 5 cases (25%). The type of mask used was a surgical mask in 11 cases (55%), an FFP2 mask in 8 cases (40%), N95 in a single case (5%).

A mask wearing duration of more than 8 hours in 14 cases (70%), between 4 and 8 hours in 6 cases (30%) and finally none of the 20 patients reported a mask wearing duration less than 4 hours.

Worsening of pre-existing acne was reported in 7 cases (35%), and primary onset in 13 cases (65%). All the patients presented both inflammatory and non-inflammatory lesions. The acne cases were divided into: Mild acne in 3 cases (15%), moderate acne in 11 cases (55%), and severe acne in 6 cases (30%).

Discussion:-

The outbreak of COVID-19 has affected many facets of life globally, including personal habits and lifestyle. The recommendation by the Center for Disease Control and Prevention and WHO for people to take preventive measures in mitigating the spread, including covering mouth and nose with a mask that had become mandatory in shops and on public transport[3], [4].

Also, Individuals tend to wear masks more often and longer than before, especially health workers who are working at a higher risk of transmission environment.

Thus, it leads to a local acne outbreak in the area covered by the mask, which is popularly called as “maskne or mask acne.” This phenomenon is supported by accumulating data about adverse effects on the skin against personal protective equipment (PPE), including mask.

This introduction of personal protective equipments (PPE), such as masks and gloves, drastically changed facial and hand dermatoses dermatoepidemiology, Dermatologists have also reported a surge in numbers of people reporting skin conditions. Hua et al **[5]** evaluated the short-term cutaneous impact of wearing surgical masks (SM) and PPE on the skin finding a relevant modification in the level of hydration, trans-epidermal water loss, pH, erythema, and sebum production. However, long-time maskwearing could increase theflare of acne due to higher temperature and humidity on the surface of facial skin caused by expired air and the perspiration [1-2].

In a Turkish survey, conducted from December 2020 to February 2021, 101 healthcare workers (HCW) were screened for facial dermatoses and it emerged that acne prevalence was present in 55.4% of participants [6].

MASKNE is probably a follicular occlusion disorder linked to mechanical stress (pressure, occlusion, friction) and microbiome imbalance (heat, pH, humidity)that might create a new intertriginous area where different type of microorganisms can grow [7].

It should be noted as our study point out that not only extended duration wearing of face masks can affect acne breakouts, but also the type of mask worn especially FFP2/KN95 masks are greater risk factors for the development of acne than surgical masks because of their higher humidity, occlusion, and temperature [8].

In fact, maskne or mask-related acne is a well-recognized comorbidity due to PPE during COVID-19 pandemic both in healthcare workers and less in the general population [9].

Also, recommendations as frequent breaks, regularly replace the surgical mask after 4 hours as the duration of weiring is an important factor in the physipathologie, and applying a moisturizer or applying a bandage before wearing a mask to mitigate the effects of long-term mask wear are crucial for the comfort of every individual, especially for healthcare workers.

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