



Case Report

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Facial Acne Vulgaris Exacerbation During COVID-19 Pandemic Due to Wearing Face Surgical Masks

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ABSTRACT

Acne vulgaris is a very common dermatologic disease. Here, we reported at least two cases of facial acne vulgaris exacerbation during the pandemic of coronavirus disease 2019 (COVID-19). Also, during the other respiratory disaster due to the severe acute respiratory syndrome coronavirus (SARS) in Singapore, skin reactions and complications of the personal protective equipment (PPE) were assessed. Acne was the most common complication of N95 masks. In China, where the COVID-19 has begun, the exacerbation of previous facial dermatoses was asked and the most exacerbated dermatoses after rosacea was acne. Two justifications for the exacerbation of acne have been proposed: first, the humid tropical microclimate created by the mask on the facial skin, which can induce acne and the second is local pressure of the mask on the face, which may cause pressure-induced obstruction of the infundibulum of hair follicles. Dermatologists should expect exacerbations of acne in many patients during the respiratory epidemic and educate their patients.

Introduction

Acne vulgaris is a very common dermatologic disease and according to the Global Burden of Disease (GBD), acne affects 85% of young adults aged 12-25 years [1]. Here, we reported at least two cases of facial acne vulgaris who were referred to our outpatient der-

matology clinic during the pandemic of coronavirus disease 2019 (COVID-19).

Case presentation

A 28-year-old lady presented with a history of mild to moderate acne repeating before every menstrual cycle healing a few days after. During the COVID-19 pandemic, the lesions of acne had spread and been persistent. The

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distribution of the lesions was the same as where the surgical mask had been covered and the patient linked the lesions to the mask and mentioned that she was wearing the mask at least 8 hours a day in the past month.

The second case was a 42-year-old lady who had a history of acne lesions in her second and third decades of life, but in recent weeks, the lesions had appeared again. The distribution of the lesions was on the chin and cheek with sparing of the forehead, exactly applicable to where her mask covered her face. She also linked the lesions to the masks she was wearing every day for long hours during the pandemic of COVID-19.

Discussion

During the COVID-19 pandemic, wearing masks by the general population and health care workers have become very common. The same scenario happened during the other respiratory pandemic due to coronavirus (Severe Acute Respiratory Syndrome (SARS)) in affected countries(2). SARS was declared in 2003 in Asia and one of the affected countries was Singapore. A survey assessing the prevalence of skin reactions and complications to Personal Protective Equipment (PPE) was done and acne was the most common complication of N95 masks (59.6%) followed by itching (51.4%) [2].

In China, where the COVID-19 has begun, the skin reactions of N95 and medical masks among the healthcare workers were assessed. In this survey, the exacerbation of previous facial dermatoses was also asked, and interestingly, all 14 patients with rosacea mentioned exacerbation and the most exacerbated dermatoses after rosacea was acne (43/6%) [3].

Two justifications for the exacerbation of acne have been proposed: first, wearing a mask may cause a humid tropical microclimate on the face skin, which can induce acne and the second one is due to local pressure of the mask on the face, which may cause pressure-induced obstruction of the infundibulum of hair follicles [2, 4].

In conclusion, we reported facial acne vulgaris exacerbation due to surgical masks during the COVID-19 pandemic to remind one of the most common exacerbated dermatologic diseases during the long-term use of masks for any reasons, especially in the respiratory epidemic and pandemic. Dermatologists should expect exacerbations of acne in many patients and may consider some general recommendations for the patients in social media since many people refuse to refer to medical centers during the pandemic.

Ethical Considerations

Compliance with ethical guidelines

All ethical principles are considered in this article. The participants were informed of the purpose of the research and its implementation stages. They were also assured about the confidentiality of their information and were free to leave the study whenever they wished, and if desired, the research results would be available to them.

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Conflict of interest

The authors declared no conflict of interest.

References

- [1] Hazarika N. Acne vulgaris: New evidence in pathogenesis and future modalities of treatment. *Journal of Dermatological Treatment*. 2019;1:33. [DOI:10.1080/09546634.2019.1654075] [PMID]
- [2] Foo CC, Goon AT, Leow YH, Goh CL. Adverse skin reactions to personal protective equipment against severe acute respiratory syndrome: A descriptive study in Singapore. *Contact Dermatitis*. 2006; 55(5):291-4. [DOI:10.1111/j.1600-0536.2006.00953.x] [PMID] [PMCID]
- [3] Zuo Y, Hua W, Luo Y, Li L. Skin Reactions of N95 masks and Medical Masks among Health Care Personnel: A self-report questionnaire survey in China. *Contact Dermatitis*. 2020; 83(2):145-7. [DOI:10.1111/cod.13555] [PMID] [PMCID]
- [4] Tan KT, Greaves MW. N95 acne. *International Journal of Dermatology*. 2004; 43(7):522-3. [DOI:10.1111/j.1365-4632.2004.02338.x] [PMID] [PMCID]