



Acne drug therapy and the development of major depressive disorder in patients with acne

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BACKGROUND

- Almost all people aged from 15 to 17 years old are affected by some type or degree of acne and 15-20% of cases are moderate to severe.¹
- In the US, the annual direct cost of acne treatment is approximately more than \$1 billion, with \$100 million on over-the-counter acne drugs or cosmeceuticals.²
- There are a variety of products available for treating acne and preventing outbreaks, including topical retinoid, isotretinoin, topical and oral antibiotics, azelaic acid, hormonal therapies, and alternative therapies.³
- Acne can produce a negative impact on patients' quality of life, most significantly impairing social and psychological functions.⁴

OBJECTIVE

- The objective of this study is to examine the association between acne drugs, especially isotretinoin, and the development of MDD among acne patients.

METHODS

- 2008-2012 MarketScan Medicaid Multi-State Database was analyzed for this retrospective cohort study
- Individuals of any age who were diagnosed with acne and treated with acne drugs were included in our study
- This study utilized the Cox Proportional-Hazard survival model with robust variance estimation to estimate the hazard developing MDD for patients receiving acne pharmacological treatments.

RESULTS

- The likelihood of MDD occurrence in patients with acne varied with age, gender, race, physician specialty, and types of acne drugs received.
- Patients who used antibiotics, topical glucocorticoid, or oral isotretinoin were significantly less likely to have MDD than those who did not use these drugs.
- The higher the cumulative dose of isotretinoin received, the lower the hazard that the patient would be diagnosed with MDD during the study period.

LIMITATIONS

This was a retrospective database analysis, so we could not control all the variables that could contribute to the incidence of MDD.

CONCLUSION

This study suggests that successful management of acne could prevent the onset of MDD.

KEY WORDS

acne vulgaris, acne drug, acne treatment, isotretinoin, retinoid, antibiotics, depression, major depressive disorder, psychological effect

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