

Teenage Acne Scarring Can Be Prevented and Treated

New York (MedscapeWire) Oct 20 — Teenage acne has generally been viewed as a normal rite of passage from adolescence to adulthood. Because of its visibility and its occurrence during a difficult time of social development, acne may often have a devastating effect on a teenager's self-confidence and self-esteem. When severe, untreated acne can result in disfiguring scars.

"Acne does not have to be an inevitable part of growing up," stated dermatologist Stephen Mandy, MD, Clinical Professor of Dermatology, University of Miami, in Florida, speaking at the American Academy of Dermatology's Derm Update 2000. "Acne is a treatable medical condition that, if left untreated, can last well beyond the teenage years. The only way to prevent the physical and emotional scarring from acne is to treat the condition before it becomes advanced."

Acne is a chronic inflammatory skin condition which affects 85% of all teenagers, more than 20 million teens nationwide. In approximately 30% of these individuals, acne will persist into adulthood. Lesions are often found on the face, but may also be present on the back and chest.

Acne is the result of a sequence of genetic and hormonal events that begin with the onset of puberty. As hormone levels associated with the development of secondary sexual characteristics rise, oil production in the sebaceous glands of the face, back, and chest increase. In genetically susceptible individuals, this leads to a thickening of the lining of the wall of the duct of the oil gland, a process called follicular hyperkeratosis. This thickening ultimately leads to a blockage of the duct and subsequent accumulation of oil beneath the skin in lesions called comedones, which are commonly referred to as blackheads. Bacteria, known as *Corynebacterium acnes*, proliferate within these comedones and produce free fatty acids which are very irritating to the skin. Allowed to proceed, this process can lead to pustular and cystic lesions which can rupture and leave scars.

"While there is no cure for acne, there are a variety of effective treatments which can control the sequence of events which cause acne," stated Dr. Mandy. "A patient's dermatologist can determine the appropriate therapy depending on the severity of the problem and the sensitivity of the skin."

Topical comedolytic agents, such as tretinoin, adapalene, azelic acid, and tazarotene, correct the follicular hyperkeratosis. Antibacterial agents, including benzoylperoxide alone or in combination with antibiotics such as erythromycin or clindamycin, are added to comedolytic agents to address the *Corynebacterium*.

In severe acne cases, where topical therapy may be inadequate, systemic therapy may be prescribed. "Oral tetracycline is most commonly used, but systemic therapy may also include other antibiotics, hormone therapy in women, and when necessary, isotretinoin," explained Dr. Mandy.

Isotretinoin is an oral medication that decreases oil production by shrinking the oil glands. Studies have shown that when isotretinoin is taken over a 20-week period, 80% of patients will have a complete resolution of their acne, in most cases, permanently. "Yet this drug must be used with extreme care," warned Dr. Mandy. "Since isotretinoin causes birth defects, women of child-bearing age must take the utmost precautions to prevent pregnancy during this therapy. In addition, there are other potential side effects which require routine monitoring by the patient's dermatologist during the treatment period."

When acne treatment begins too late or is inadequate, scarring is often the outcome. Fortunately, dermatologic surgery provides more safe and effective treatments for acne scarring than ever before.

"It is important for teenagers and their parents to realize that both acne and acne scarring are treatable medical conditions," stated Dr. Mandy. "Early and ongoing therapy may reduce and even prevent the physical and emotional toll of this common skin condition

Is There a Link Between Depression and Accutane?

There is little evidence in the medical literature linking isotretinoin (Accutane) with depression and suicide. Despite this, there exists a popular misconception that isotretinoin commonly causes depression.

Despite the manufacturer's warning that Accutane can cause psychiatric symptoms, there is no evidence of a cause and effect relationship. One Canadian study found that 4% of patients taking Accutane became depressed and remained depressed during treatment. That study, however, did not include control subjects for comparison. Studies of this sort, without controls (persons not taking Accutane), cannot provide convincing scientific data about whether a common disorder—depression—is caused by a drug.

A more powerful analysis of the same database using control cases did *not* show Accutane to be associated with increased risk of either depression or suicide. The *Journal of the American Academy of Dermatology* published one large review of the literature and concluded that no evidence established a link between Accutane and either depression or suicide.

Here are results and conclusions of other recent studies on this topic:

Int J Dermatol. 2013 Feb;52(2):163-8. doi: 10.1111/j.1365-4632.2011.05334.x.

Mood changes, depression and suicide risk during isotretinoin treatment: a prospective study.

Before the treatment, six percent of the patients had suffered from depressive symptoms. During the isotretinoin treatment, we did not find any deterioration of depression problems in any of these patients. On the contrary, in most patients the depressive symptoms disappeared. No occurrence of suicidal ideations was found.

CONCLUSIONS:

We did not find any depressive symptoms or suicide risk caused by isotretinoin. On the contrary, a statistically significant improvement was found. In our opinion, patients have to be informed about the risk of depression but emphasizing the fact that it is very rare.

Dermatol Clin. 2005 Oct;23(4):665-74.

Acne, depression, and suicide.

Abstract

Acne is a common disorder that may have a considerable psychological impact including anxiety and depression. Depression and suicide occur frequently in adolescents and young adults. Although case reports suggest an association between isotretinoin and depression and suicide, more rigorous observational studies and epidemiologic studies, using different designs, have not shown any effect of isotretinoin use in increasing the occurrence of depression and suicide. It is prudent for the practitioner to continue to use isotretinoin to treat severe acne, while at the same time informing patients and their relatives that depressive symptoms should be actively assessed at each visit and, if necessary, referral to a psychiatrist and a discontinuation of isotretinoin should be considered.

Can J Clin Pharmacol. 2007 Summer;14(2):e227-33. Epub 2007 Jun 6.

No association found between patients receiving isotretinoin for acne and the development of depression in a Canadian prospective cohort. Cohen J.

Abstract

BACKGROUND:

There has been concern that the use of isotretinoin to treat acne may lead to depression. To date, research has not conclusively determined if this concern is warranted when contemplating the use of isotretinoin.

RESULTS:

There was no correlation between isotretinoin use and the development of depression, based on either the Centre for Epidemiologic Studies Depression scale (Fisher's exact test, $P=0.497$) or Zung Depression Status Inventory (ANOVA; $F=1.4$, $P=0.2$).

CONCLUSION:

Isotretinoin does not appear to be associated with the development of depression. Thus, denying patients with significant acne an effective medication for fear of developing depression may not be indicated at this point in time

Br J Gen Pract. Feb 1, 2005; 55(511): 134–138.

Isotretinoin, depression and suicide: a review of the evidence

Conclusions

Consideration of the data available would suggest that the incidence of depression and suicide during isotretinoin therapy may be no greater than the background incidence. A causal relationship has not been demonstrated. Given the evidence suggesting that isotretinoin treatment may attenuate psychiatric associations of acne, and given the evidence that acne is often not a trivial complaint, withholding therapy because of concerns regarding depression or potential for suicide is not justified.

Semin Cutan Med Surg. 2007 Dec;26(4):210-20. doi: 10.1016/j.sder.2008.03.005.

Depression and suicidal behavior in acne patients treated with isotretinoin: a systematic review. Marqueling AL1, Zane LT.

Abstract

Isotretinoin is an effective treatment for severe cystic or recalcitrant acne vulgaris; however, concerns have been raised regarding its potential association with depression and suicidal behavior. We sought to explore the proposed relationship between isotretinoin use and the risk of depression and attempted and completed suicide in patients with acne vulgaris by performing a systematic literature search for studies reporting primary data on depression and suicidal behavior in patients treated with isotretinoin for acne vulgaris. Overall, studies comparing depression before and after treatment did not show a statistically significant increase in depression diagnoses or depressive symptoms. Some, in fact, demonstrated a trend toward fewer or less severe depressive symptoms after isotretinoin therapy. This decrease was particularly evident in patients with pretreatment scores in the moderate or clinical depression range. No correlation between isotretinoin use and suicidal behavior was reported.

Int J Dermatol. 2009 Jan;48(1):41-6. doi: 10.1111/j.1365-4632.2009.03806.x.

Comparison of depression, anxiety and life quality in acne vulgaris patients who were treated with either isotretinoin or topical agents. Kaymak Y

RESULTS:

At the end of the second month quality of life was more impaired in the topical treatment group compared to the isotretinoin group ($P < 0.05$). At the end of fourth month quality of life and all psychological test scores had improved more in the isotretinoin group compared to topical treatment group ($P < 0.05$).

CONCLUSION:

Results of the present study indicate that there is no increase in depressive and anxiety symptoms in the isotretinoin treatment group compared to that in the topical group. Instead, successful treatment of acne seems to improve both depressive and anxiety symptoms and improve quality of life.

J Am Acad Dermatol. 2003 Sep;49(3):424-32.

Isotretinoin and antidepressant pharmacotherapy: a large retrospective database study. Hersom K1, Neary MP, Levoux HP, Klaskala W, Strauss JS.

Abstract

BACKGROUND:

Isotretinoin is indicated for the treatment of severe, recalcitrant nodular acne. Spontaneous reports have suggested a possible association between isotretinoin and depression that has not been supported by prior studies. Depression has been reported in patients with acne and is common among adolescents.

OBJECTIVE:

The objective of this study was to investigate whether there is an association between isotretinoin use and onset of depression.

CONCLUSION:

The results do not support an association between the use of isotretinoin and the onset of depression.

Arch Dermatol. 2000 Oct;136(10):1231-6.

Isotretinoin use and risk of depression, psychotic symptoms, suicide, and attempted suicide. Jick SS1, Kremers HM, Vasilakis-Scaramozza C.

DESIGN:

Large population-based cohort studies.

CONCLUSION:

This study provides no evidence that use of isotretinoin is associated with an increased risk for depression, suicide, or other psychiatric disorders.

Is There a Link Between Bowel Disease and Accutane?

A study looking at 45,000 patients showed no association between isotretinoin and inflammatory bowel disease (Ulcerative Colitis and Crohn's Disease).[69] The authors concluded "Because inflammatory acne in children and adolescents carries a high psychological burden, clinicians should not be discouraged from prescribing this drug owing to a putative association with IBD."

Actor James Marshall sued Roche over Accutane-related disease that resulted in removal of his colon. [105] The jury, however, decided that James Marshall had a pre-existing bowel disease. [106]