



A Review on Causes and Management of Acne with Some Home Remedies.

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Abstract

The word acne comes from the word acme meaning "the highest point," which comes from the Greek akme meaning "point or spot". In the entire world 650 million people with acne have been suffering, which is about 9.4 % of the world population out of which females are 9.8 % men amounting to 9.0 % which indicates females are more prone to this acne disease .It attracts nearly 40 to 50 million population in the United States (16 %) and more or less 3 to 5 million people in Australia (23 %). Acne is most common skin disease. Acne effects all races and ages and became the most common skin disease, especially in teenagers and young adults. It is estimated approximately 90 % out of age group between 11 and 30 are being attacked by acne outbreaks and during puberty in both sexes, acne can be born owing to an increase in androgens such as testosterone and 90 % are suffering from acne at puberty stage all over the globe. Nearly 80 % out of age group of 11 to 30 year-olds are the sufferers with acne at any time of this stage basing on their physiological condition of their body and some people in their age at 40s and 50s still get acne disease. Acne is one of the greatest skin problems faced by adults. As many as 25 percent of all adult men and 50 percent of adult women suffer from acne disease at some point in their life. But adult acne can be particularly frustrating. Research shows 35 % of women in their 30s, 26 % in their 40s, and 15 % age 50 + are the sufferers from acne disease. Women over the age of 33 are more likely to get premenstrual pimples than younger women. The chief ground for this disease is the bad environment, eating an inflammatory diet or living a sedentary lifestyle or both can contribute to the underlying cause of acne. The information on this article can help to understand acne, types of acne, causes for development of acne treatment and home remedies and treatment.

INTRODUCTION

Medically, acne termed as acne vulgaris a common form of skin disease that involves the oil glands at the base of hair follicles. Acne is an infection of the skin. It commonly occurs during puberty when the sebaceous (oil) glands come to life. The said glands are stimulated by male hormones produced by the adrenal glands of both males as well as females. The form of acne is called acne vulgaris, which implies "common acne". It is an infection of the skin, caused by changes in the sebaceous glands. The red color comes out of the inflammation of the skin owing to the infection existed in the skin. Acne is a common skin disease with pimples which is common in young people. Most of the people develop acne but it primarily affects teenagers who are undergoing hormonal changes. Acne may be mild with few, occasional pimples, moderate with inflammatory papules, or may be severe with nodules and cysts and the treatment depends on the type of condition of the disease. Acne is common during puberty, which is a stage when a person is shaped from a child into an adult, owing to secretion of high levels of hormones. Acne becomes common as people reach adulthood. Human skin has pores (tiny holes) which connect to oil glands located under the skin. The glands are connected to the pores via follicles which are small canals. These glands produce Sebum an oily liquid which carries dead skin cells through the follicles to the surface of the skin. A small hair grows through the follicle out of the skin. Pimples grow when these follicles get blocked, resulting in an accumulation of oil under the skin. The skin consists of tiny holes called pores that can become blocked by oil, filth and bacteria which paves way to develop a pimple or "zit." Under the blocked pore, oil builds up. Skin bacteria then grow very quickly. This infection makes the skin become swollen and red, which becomes visible. And if skin is repeatedly affected by such state, acne may appear but it is not a life-threatening condition, though painful when it turns violent. In human beings the common places acne disease usually occurs are the face, neck, chest, back, and upper arms. Acne that appears on the face chronically may cause permanent scarring, yet not dangerous. Scientists from the Washington University school of medicine found that there are good and bad strains of bacteria that determine the severity and frequency of developing acne. They explained in the journal of investigative dermatology (March 2013 issue) that not all acne bacteria trigger pimples, in fact, one strain they identified can help keep the skin pimple free. To express in a nut shell, skin cells, sebum and hair can clump together into a plug, which gets infected with bacteria resulting in a swelling. A pimple starts to develop when the plug begins to break down.



Figure 1: Various Acnes.

Types of Acne

1] Whiteheads

Remain under the surface of skin and are very small.

2] Blackheads

Vividly look black and rise to the surface of the skin but are not formed due to dirt. Black heads are not black because of dirt they are black in color. Generally air oxidises the protein called keratin.

3] Papules

They are small tender pink bumps which are clearly seen on the skin.

4] Pustules

Pustules (pimples or zits) are red at the bottom level consisting of pus at its top and can be looked on the surface of the skin.

5] Nodules

Clearly visible on the surface of the skin. They are painful, large, solid pimples existing deeply in the skin and can be seen on the skin surface.

6] Cysts

Clearly visible on the surface of the skin. They are deeply rooted, painful and pus filled and easily prone to form scars.

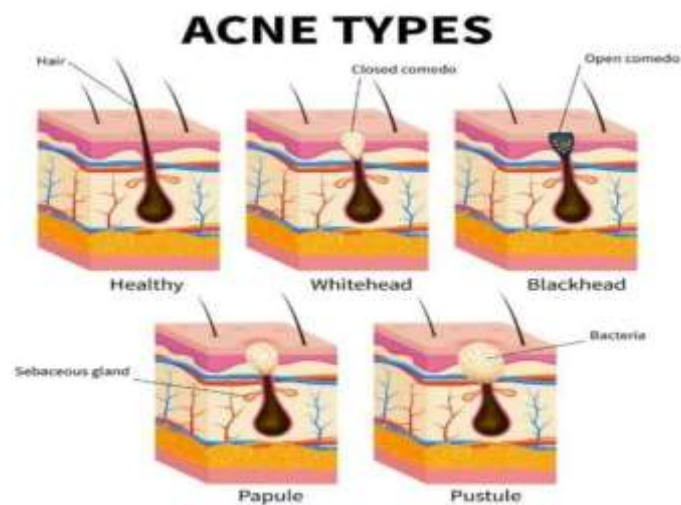


Figure 2: Typea of Acne.

Signs and Symptoms of Acne

It includes papules, nodules (large papules), seborrhea (increased oil-sebum secretion), comedones, pustules and scarring. The appearance of acne varies with skin color and it is also associated with psychological and social problems.

Acne scars shows inflammation within the dermis and it is created by the wound healing resulting in collagen deposition at one spot.

Causes of Acne

Acne develops due to blockage of follicles, hyperkeratinization and keratin plug formation and sebum (microcomedo). With increased androgen production, sebaceous glands are enlarged and sebum production is increased. The microcomedo may enlarge to form an open comedo (blackhead) or closed comedo. Comedones occur as a result of clogging of sebaceous glands with sebum, naturally occurring oil and dead skin cells



Figure 3: Causes of Acne.

Diet

The relationship between acne and diet remains unclear although high glycemic diet is associated with worsening of acne. There is a positive association between the milk consumption and prevalence of acne increases. Reports showed that consumption of chocolate and salt are not associated with development of acne. Chocolate contains large amount of sugar that can lead to high glycemic load. It might be possible that acne is linked with obesity and insulin metabolism.

Parasitic

Acne is linked with the parasitic mite Demodex but it is not clear whether Demodex or Demodex associated bacteria causes the effects.

Drug Use

Drugs like Phenytoin, Isoniazid, Phenobarbital, Lithium, Ethionamide, Steroids, Azathioprine, Quinine and Rifampin causes acne.

Genetic

There are multiple candidates for genes related to acne which includes polymorphisms in Tumor necrosis factor-alpha, Interleukin-1 alpha, CYP1A1.

Psychological

Studies shows that increased stress levels are associated with increased acne severity. The National Institutes of Health (USA) shows that stress can cause acne flare.

Hormonal

Menstrual cycles and puberty may also causes acne. During puberty, increase in androgens level causes the enlargement of follicular glands and sebum production is also increased. Anabolic steroids produce similar effect. Several hormones are linked with acne like the androgens testosterone, dihydrotestosterone, dehydroepiandrosterone sulfate and insulin like growth factor 1 (IGF-1).

Environmental Factors

It includes various factors like High-humidity, Prolonged sweating, Increase in skin hydration, Exposure to dirt or vaporized cooking oil or certain chemicals like petroleum derivatives.

DIAGNOSIS AND EVALUATION

1. The diagnosis of acne is generally established by identifying of quantity and morphology of the lesions.
2. Their morphologies are divided into the non-inflammatory comedones, termed as open (blackheads) or closed (whiteheads) and the inflammatory lesions, termed as papules, pustules, cyst, or nodules.
3. American Academy Dermatology (AAD) classified the severity of acne into mild, moderate, and severe.
4. Mild acne is characterized by the presence of a few to several papules and pustules, but no nodules.
5. Moderate AV is characterized by several papules and pustules, along with a few nonodules
6. Severe AV is characterized by numerous or extensive papules and pustules, as well as multiple nodules.



Figure 3: Stages of Acne.

Management

Type of Treatment	Mild Acne	Moderate acne	Severe acne
First-line medication	<ul style="list-style-type: none"> • Topical retinoid; or • Benzoyl peroxide; or • Topical combination therapy 	<ul style="list-style-type: none"> • Topical combination therapy; or • Oral antibiotic, topical retinoid, and benzoyl peroxide; or • Oral antibiotic, topical retinoid, benzoylperoxide, and topical 	<ul style="list-style-type: none"> • Oral antibiotic and topical combination therapy; or • Oral isotretinoin
Alternative medication	<ul style="list-style-type: none"> • Add topical retinoid or benzoyl peroxide (in case one is not used already); or • Consider alternative retinoid; or • Consider topical dapsone 	<ul style="list-style-type: none"> • Consider alternative combination therapy; or • Consider change in oral antibiotic; or • Add combined oral contraceptive or oral spironolactone (female patients); or • Consider oral isotretinoin 	<ul style="list-style-type: none"> • Consider change in oral antibiotic; or • Add combined oral contraceptive or oral spironolactone (female patients); or • Consider oral isotretinoin

Table 1: Topical combination therapy (benzoyl peroxide and antibiotic agent; retinoid and benzoyl peroxide; or retinoid, benzoyl peroxide, and an antibiotic) may be prescribed as a fixed-dose combination product or as separate components.

Several amazing home remedies for acne

Some natural treatments may be useful in reducing acne inflammation and breakouts. Instead of spending money for expensive treatments, some home remedies are mentioned below to get clear skin with natural treatments at home.

1. Raw papaya fruit

It is a natural acne remedy for the removal of dead skin cells as well as excess lipids from skin surface keeping it soft.

Papaya also contains an enzyme papain, which reduces inflammation and aids to stop pus formation. One fresh papaya is needed.

2. Turmeric

Turmeric is usually considered as an effective home remedy for acne. Mix ¼ teaspoon of turmeric powder to two teaspoons of coconut oil. Mix the mixture well. Apply the mixture on face. Let the mixture sit fifteen minutes. Then wash with cool water.

3. Bananas peels

It contain something substance known as lutein, one of the powerful antioxidant which decreases the swelling and inflammation, and helps healthy cell growth of the skin of one banana peel is required.

4. Aloe vera gel

Aloe vera gel is having antibacterial properties and soothing substance which works as an anti-inflammatory duly reducing redness and swelling of acne. Sufficient aloe vera gel to be applied duly covering the acne affected areas.

5. Strawberries and honey

Strawberries and honey mix used to acne disease commonly in harsh, facial scrubs and cleansers. Strawberries are high in salicylic acid which helps the epidermis of the skin to shed its cells more readily duly opening the clogged pores, duly neutralizing bacteria and aids for the growth of new skin cells. Three fresh strawberries and two teaspoons of good honey to be kept ready.

6. Lemons

Lemon act as an exfoliant, disinfectant and skin lightener to decrease the appearance of new pimples forming and scars. Dab with a cotton ball or cotton swab dipped in a lemon juice on a clean face then rinse with cool water. Lemon juice works as a disinfectant. It will kill bacteria that cause acne. Lemon juice can also stimulate circulation to the skin which will get essential nutrients from body to aid fight acne.

7. Tomatoes

Tomatoes are naturally rich in antioxidants and vitamin-C and A. Tomatoes are used for acne remedy because these are available at any food store. First slice a small tomato in half. Rub the opened half over areas of the skin where acne is present. Massage the juice on skin for few seconds is very easy application. Eventually rinse face with warm water. Apply twice a day for getting decorous results.

8. Sea salt mixture

Sea salt mix with honey can aid dry out pimples and absorb excess of oil. It can be used as an effective home remedy for treating acne.

CONCLUSION

This brief review highlights the relevant clinical findings and pathology of acne vulgaris as a chronic inflammatory skin disease affecting the pilosebaceous glands. It has multifactorial causes and manifestations varying from the mild to severe degree. Several highly effective treatments of choice have been proposed as a monotherapy or combination therapy to reduce and prevent the occurrence of acne. Appropriate clinical considerations are needed for clinicians to ensure a comprehensive approach in the management of acne vulgaris. Despite recent scientific investigations, researchers are still not able to arrive at correct conclusions scientifically about acnes on the various parts of the body. But the proper option is to abandon all things that may cause or worsen the acne by keeping face and body skin clean every day. Diet, lifestyle and herbs can be an important part of natural remedies. Born of Acne cannot be cured. After its emergeit can be controlled with treatment.

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