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THE POTENTIAL OF HERBAL FACE SPRAYS IN ACNE THERAPY: A REVIEW

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ABSTRACT
Acne is a widespread inflammatory skin condition that occurs during adolescence due to hormonal fluctuation but can affect individuals of all ages. It typically appears on areas with active sebaceous glands, such as the face, chest and back manifesting as blackheads, whiteheads, papules, pustules, nodules and cysts. The condition is driven by factors such as excessive sebum production, clogged pores, bacterial growth and inflammation. Acne vulgaris is the most frequent type, with triggers including hormonal changes, stress, cosmetics, medications and genetic predisposition. Severe forms, such as nodulocystic acne, can lead to psychological effects, including diminished self-confidence and, in some cases suicidal thoughts. Both traditional remedies and modern treatments aim to address these root causes. Natural agents like java plum, (syzygium cumini), and guava leaves (Psidium guajava) exhibit anti-inflammatory, anti-oxidant and antimicrobial properties, making them promising alternatives to synthetic drugs with fewer side effects. Additionally, several commercial products including niacinamide serums, syndet cleansers and anti-pigmentation gels, incorporate active ingredients like niacinamide, tea tree oil, and kojic acid to effectively manage acne symptoms.

KEYWORDS: Acne, Java Plum, Kojic Acid, Skin, Natural Remedies.

INTRODUCTION

Acne is a prevalent skin condition that manifests as pimples on the back, chest, and face. Oil, dead skin cells, and germs block the skin's pores, causing it to happen. The areas where sebaceous glands are most active—the face, chest, back, and shoulders—are where it manifests. Although hormonal changes during puberty make acne more common, it can afflict students of all ages.

Most people get acne at some point in their lives. Acne is more common in young adults and teenagers going through hormonal changes, although it can also happen in adults. Women and students assigned female at birth (AFAB) are more likely to have adult acne. If acne runs in your family, you may be more susceptible to getting it yourself.

Usually throughout puberty, an increase in androgen levels, such as testosterone cause acne. Both in women and men. As people mature, acne tends to lessen and eventually go away. Cysts are huge nodules, and nodulocystic acne is severe inflammatory acne. Unlike typical acne, cystic acne affects deeper skin tissue and can appear on the buttocks, groin, armpit area, hair follicles and sweat ducts. Reduced self-esteem and, in rare instances, depression or suicide are among the physiological impacts of acne.

According to reports, 7.1% of patients with acne had suicidal thoughts. Adolescence is typically when acne appears. The presence of papules, scars, comedones and pustules is referred to as acne. Acne vulgaris is the most prevalent type of acne, a lot of teenagers get this kind of acne. Acne vulgaris present that comedones are present. Hormonal alteration that results in oilier skin. These have to do with stress, menstruation, pregnancy, puberty, birth control. Oily or greasy hair and cosmetics. Some medications (including phenytoin, testosterone, estrogen and steroids).

Classification

Blackheads

Blackheads are non-inflammatory acne lesions that develop on the skin when the hair shafts are obstructed by excess oil and dead skin cells. A blackhead is referred to as an open comedo because the dark, brown or black skin surface is still visible. Blackheads another name for

mild acne, usually appear on the face, arm, shoulder, neck, chest, and back.

Whitehead

When bacteria, oil and skin cells block the pores that open in hair follicles, whiteheads-tiny pimples and a non-inflammatory acne lesion- appear on the skin. Since whiteheads are closed, white pimples are also known as closed comedones. Whiteheads can develop anywhere in the body, but they are most frequently found in the T-zone, which includes the nose, chin, and forehead.

Papules

The body's response to bacteria, excess oil production, and androgen activity is inflammation, which manifests as swelling, heat, redness, and discomfort. These inflammatory lesions, called papules, are believed to be a stage in between non-inflammatory and inflammatory lesions. Papules are small, pink, less than 5mm in diameter, and typically not pus-filled lumps that develop on the skin.

Pustules

When dead skin cells and too much oil clog the pores, the skin develops tiny lumps and inflammatory lesions called pustules. They usually show up as red, swollen skin surrounding white zits. While pustules can appear anywhere on the body, the underarms pubic region, shoulders, and chest. The back, face, neck and hairline are the most frequently affected areas.

Nodules

Bacteria, excess oil and dead skin cells clog pores, causing acne nodules, a severe form of inflammatory acne. Blackhead and whitehead comedones are usually the result of this combination, but if infection damages the pores and spreads beneath the skin surface, the surrounding area may also become bloated, and red, giving the response of a little bump. Acne nodules can last for weeks or months and are not treatable with over-the-counter medications. Although acne nodular is larger than 5 to 10mm in diameter and typically develops on the chin or jawline of the face, it is similar to papule acne.

Factors

Excess production of oil (sebum), blockages in hair follicles caused by dead skin cells and oil inflammation bacteria because the face, forehead, chest, upper back, and shoulders contain the most oil, (sebaceous) glands acne usually develops there. Oil glands are linked to the hair follicles. A whitehead may form from a bulging follicular wall. Alternatively, a blackhead could form if the plug is exposed to the surface and darkens. Blackheads might resemble dirt trapped in pores.

However, the pore is clogged with oil and bacteria, which turns brown when exposed to air. When blocked hair follicles become irritated or contaminated with germs, and pimples- which are elevated red spots with white centre-form. Deep within your hair follicles, blockages and inflammation result in cyst-like lumps beneath the skin surface. Acne typically doesn't affect other pores in your skin, such as sweat glands opening.

Plant profile

Java plum: Syzygium cumini, often known as the java plum, is a tropical fruit-bearing tree indigenous to Southeast Asia and the Indian subcontinent. Jamun black plum, Indian blackberry, and Malabar plum are some of its common names.

Medicinal properties of java plum

a) Packed with nutrients- Rich in antioxidants, iron and vitamin C.
b) Java plum's anti-inflammatory properties help reduce redness, swelling and inflammation associated with acne.

Scientific classification

Kingdom	Plantae
Class	Dicotyledons
Order	Myrtales
Family	Myrtle family
Genus	Syzygium
Species	Syzygium cumini

Guava leaves: The Guava tree (Psidium guajava), a tropical fruit-bearing member of the Myrtaceae family, produces guava leaves as its foliage. Many traditional and herbal medicines make use of these leaves because of their well-known therapeutic and medicinal qualities. Medicinal properties of Guava leaves:

a) Quercetin and Other flavonoids are antioxidants.
b) Anti-microbial properties are aided by tannins.

Scientific classification

Kingdom	Plantae
Class	Magnoliopsida
Order	Myrtales
Family	Myrtaceae
Genus	Psidium
Species	Psidium guajava

Market product available

S.no.	Brand name	Drug name	Uses
1.	Niacinamide serum	Niacinamide, vitamin B3, Zinc	Anti-ageing,
2.	Syndet facial cleanser	Papaya, aloe vera,	Reduce acne, control oil production, help unclog pores & reduce acne
3.	Brightening Depigmentation gel	Grape seed extract, wheat germ extract, Rose water, Tea Tree oil	Anti-pigmentation. Lightens dark spots, and reduces skin ageing.
4.	Skaar try gel	Cepae extract, Heparin sodium, Allantoin gel	Reduces inflammation, Reduces blackhead & whitehead, Reduces sebum production.
5.	Clincure-N ointment	Clindamycin, Nicotinamide gel	Reduce acne.
6.	KC-lite cream	Kojic acid dipalmitate, Vitamin C&E, Cyclomethicone	Lightens skin, Reduces pigmentation, and Soothes skin.

DISCUSSION

A widespread skin disorder that affects millions of people, acne usually manifests as pimples, blackheads, or cysts on places like the face, chest, and back where sebaceous glands are most active. Hormonal changes, particularly increased androgen levels, which boost oil production, are the main cause of its development throughout puberty. Acne usually gets better with age but, especially in women, hormonal changes brought on by menstruation, pregnancy, or the use of contraceptives can cause it to last into adulthood. Those who have a family history of acne are more likely to get it, therefore genetics also plays a part. Suicidal thoughts are reported by 7.1% of acne sufferers, highlighting the necessity for comprehensive therapy. Acne can also have an impact on mental health.

Herbal treatments and pharmaceuticals are available as treatment alternatives. While depigmentation gels target scarring, products like niacinamide serums and syndet cleansers assist reduce oil irritation. In severe circumstances, medical interventions may be necessary. Herbal remedies, like Psidium guajava (Guava leaves) and Syzygium cumini (Java plum), work well and have fewer negative effects. The anti-inflammatory qualities of java plum help to reduce redness, and the anti-oxidant and anti-microbial in guava leaves promote healing. Promising outcomes can be obtained by combining

pharmaceutical and natural therapy. For, comprehensive successful acne treatment, more study on natural solutions and their psychological advantages is essential.

CONCLUSION

Acne vulgaris is a common skin disorder that impacts many people's lives. An integrated therapy approach that considers several crucial aspects of acne treatment is required to get the intended results. The incredibly promising effects of our traditional herbs in treating acne have been shown in numerous clinical investigations. Plants are a natural source of acne-treating drugs with few or no adverse effects, despite the wide variety of pharmaceuticals currently on the market. They can therefore be widely used as alternatives to synthetic acne drugs. Acne is a prevalent inflammatory skin condition that primarily affects adults and typically causes social humiliation and depression. Acne is caused by four primary pathogenic variables listed above; researchers can exploit this pathological process to create a range of acne management treatments. A thorough understanding of irritants that cause microcomedone formation and the transformation of non-inflammatory lesions to inflammatory lesions is essential to maximizing the effectiveness of both new and existing treatments.

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