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An Extensive Analysis of Acne and Herbal Treatments

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Abstract: *The prevalent skin ailment known as acne, which affects millions of people worldwide, is typified by the appearance of pimples, blackheads, and whiteheads. Because of its complexity, ubiquity, and wide range of clinical manifestations, dermatologists face significant challenges. Acne affects 83% of teenage girls and 99.5% of teenage boys due to hormonal changes, and it can last throughout adolescence. Although there are traditional therapies like topical creams, antibiotics, and oral drugs, more people are turning to alternative remedies because they are worried about long-term sustainability and side effects. Therefore, it is preferable to use herbal plants to reduce side effects and provide relief from acne issues.The knowledge on plants including German chamomile, calendula, licorice, green tea, and Eastern purple coneflower is highlighted in this review. Witch hazel, tulasi, turmeric, neem, and aloe vera. Additionally, this research focuses on the briel history of acne, the taxonomical classification of plants, their morphology, and the chemical ingredients of plants that have anti-inflammatory and anti-acne properties. cleansing, moisturizing, antimicrobial, and antioxidant. This article covers the various ways that plants can be used as home medicines.*

Keywords*:* herbals, skin, acne, natural cures, and acne vulgaris

I. INTRODUCTION

Acne is a disorder of the hair follicles and oil glands (sebaceous glands). The sebaceous glands secrete oil called sebum, which keeps the skin moisturized. Congested glands can cause blotches and cysts. People of all ages and races are affected by acne. Acne can be treated using a variety of chemical and natural methods . Acceptance Date: May 6, 2024 There are various types of acne, including papules, pustules, whiteheads, blackheads, cystic acne, and more.Acne vulgaris affects an estimated 50 million Americans annually, with around 85% of youngsters having some kind of the condition. From little pimples to massive cysts, acne can manifest itself in a variety of ways. Medical experts and researchers believe that one or more of the following factors may contribute to acne an overabundance of oil being produced inside the pore. Development of bacteria in the pore.

HISTORY:

Historical Civilizations: Civilization: Among the several treatments used to treat skin disorders were Egyptian concoctions that contained sulfur.

1. Greek and Roman Civilizations: The famous Greek physician Hippocrates, who lived from 460 to 370 BCE, described acé-like skin eruptions.

2. **The Middle Ages:** During the Middle Ages, superstition and rudimentary medical knowledge coexisted.

3. **Early Modern and Renaissance Eras:** As medical knowledge grew during the Renaissance, it became more and more clear how important cleanliness and hygiene were to keeping healthy skin.

4. The 19th Century: In the 19th century, dermatology began to develop as a distinct medical specialty.

5. **The 20th century:** The 20th century saw significant advancements in dermatology and our understanding of acne. By focusing on the role bacteria play in the development of acne, antibiotics such as tetracycline revolutionized acne treatment.

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6. **The International Journal of Pharmaceutical:** Applications and Research Pages. 1653-1663 in Volume 9, Issue 3, May-June 2024, www.ijprajournal.com 2456-4494 ISSN UPRA Journal The late 20th century and later: Accutane, a powerful oral medication derived from vitamin A, was created in the latter half of the 20th century to treat severe and persistent acne.

TYPE OF ACNE:

1. Non-inflammatory Acne:

These are mild types and don't cause much redness or pain.

Blackheads – Small black dots on the skin; the pore is open and filled with oil and dead skin.

Whiteheads – Small white or skin-colored bumps; the pore is closed and filled with oil and dead skin.

2. Inflammatory Acne:

These are red, swollen, and can hurt because of bacteria and inflammation.

Papules – Small red bumps without pus.

Pustules – Red bumps with a white or yellow tip filled with pus.

3. Severe/Deep Acne:

These are bigger, more painful, and can leave scars.

Nodules – Large, hard lumps deep under the skin.

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Cysts – Large, soft, pus-filled lumps under the skin that hurt a lot and may cause scars.

TREATMENT OF ACNE:

1. Echinacea purpurea, or eastern purple coneflower:

Plantac Plants, Kingdom Subkingdom: Vascular plants (Tracheobionta) Superdivision: Seed plants, or Spermatophyta Division: Flowering plants (Magnoliophyta) Class: Dicotyledons (Magnoliopsida) The Asteridae subclass Order: Asterales The Asteraceae family J. Presl. & Bercht. Aster family The Echinacea genus Moench purple coneflower The eastern purple coneflower, Echinacea purpurea (L.) Moench, is the species. Common names include Echinacea, hedgehog coneflower, purple coneflower, and castern purple coneflower.

Morphology: "flower" or "daisy" As with the head, it is actually a collection of numerous little florets. About the inner (disc) florets, which end in spines, are drooping florets with teeth at the ends. The echinacea genus is known for its spikey flowering heads, which are characterized by an elevated receptacle called a "cone." The Purple Echinacea grows on its own in open woodlands. The shrub has a brown, prickly, or medium-sized pistil surrounded by gorgeous purple petals. Often the prickly, cone-shaped center causes the petals to tilt to one side. The flower leaves are tough and have tiny hairs. The leaves may have anywhere from one to five nerves, which is an odd number. The plant usually grows to a height of 140 cm.

Constituents: Alkamides, polysaccharides, and derivatives of caffeic acid are the three primary groups of secondary metabolites found in the plant that have received the most attention in papers. In one study, 10 alkamides, most of which contained 2-methylbutylamide and isobutylamide moieties, were successfully purified using the plant root's n-hexane extract.

Mode of Action: In an in vitro study, it was discovered that echinacea might inactivate acnes and stop the proinflammatory cascade that follows. Echinacea has also been found to have antioxidant action, which may help reduce the production of free radicals in acne.

Uses:

1. Skin Disorders
2. Effects of Antioxidants
3. Properties That Reduce Inflammation
4. Defense of the Immune System.

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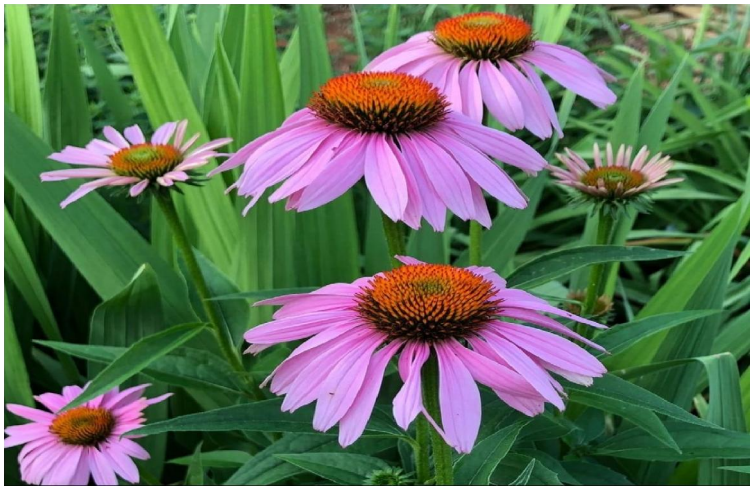

2. Green tea (Camellia sinensis)

belongs to the Phylum Angiosperms (flowering plants) in the
Kingdom :Plantae.
Family: Theaceae
Class: Edicts
Order: Ericales
Genus: Camellia
Species: Camellia sinensis.
Vernacular name: "Tea Plant" or "

Morphology: The glossy, vivid green leaves of the evergreen tea plant are often hairy on the underside. The tea plants can be found alone or in clusters of two to four, with fragrant, white flowers. The brownish-green fruits of the tea plant contain one to four spherical or flattened seeds. The leaves are oval in shape, dark green above, glossy, and usually 5–10 cm long with a point at the tip. dentate, or finely serrated, leaf edge. The fragrant, delicious blossoms can reach a diameter of 4 cm and have five petals. The fruit consists of a three-angled capsule surrounded by persistent sepals and three seeds.

Constituents: The primary catechins are epicatechin (EC), epicatechingallate (ECG), epigallocatechin gallate (EGCG), and epicatechin (EGC). Green tea also contains myricetin, quercetin, and kaempferol, among other flavonoids. L-theanine, vitamins C, B2, and riboflavin, as well as essential oils for folic acid, manganese, potassium, and fluoride.

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Mode of Application:

Do it yourself (DIY) green tea masks: Make your own green tea face mask. Mix cold brewed green tea with yogurt, honey, or aloe vera gel to create a relaxing mask. Rinse the mixture off your face 15 to 20 minutes after applying it.

Green Tea Ice Cubes: Cool irritated acne spots with ice cubes made from brewed green tea. Apart from the possible benefits.

The cold can help reduce inflammation because of the antioxidants in green tea.

Uses:

Anti-inflammatory properties of catechins.

Reduce redness and irritation associated with acne by soothing irritated skin with L-theanine.

3. German Chamomile (Matricariachamomilla or Matricariarecutita)

Kingdom: Plantae

Phylum (or Division): Angiosperms (flowering plants.

Class: Eudicots

Order: Asterales

Family: Asteraceae (Compositae)

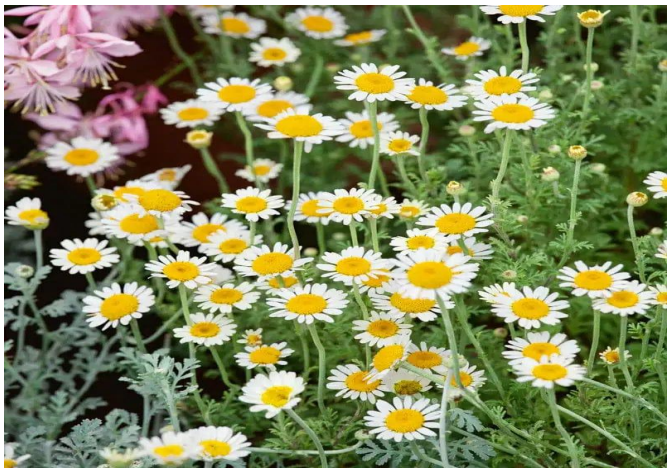
Genus: Matricaria

Species: Matricariachamomilla or Matricariarecutita

Vernacular names:

English-Wild Chamomile

Indian-BabunekaPhool or Babuna.



Morphology: The resultant fruits are called achenes and are cylindrical in shape. There are no scale-like pallets between the petals of the capitulum in German chamomile. The capitulum has a long, cone-shaped bottom and is hollow. It is an annual plant. reaches a height of 10 to 80 cm and produces white, ligulate blooms that smell deliciously of chamomile. With feathery foliage and daisy-like white flowers, this fragrant annual plant reaches a height of 10 to 60 cm and reaches approximately 20 inches. Its blossoms are aromatic, but its leaves have no scent. The outer ring ray and inner disc florets are frequent travelers, and the flowers are clustered in heads or a capitulum with three abaxial and two nearly marginal thin ribs.

Components:

When chamomile essential oil is distilled, a blue-colored sesquiterpene molecule known as chamazulene is produced. It has anti-inflammatory and antioxidant properties.

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Alpha-Bisabolol (Levomenol): Alpha-bisabolol is a terpene that is widely known for its antibacterial, anti-inflammatory, and anti-irritating properties. due to its capacity to calm skin. Skincare products usually contain it.
Apigenin: Antioxidant properties may protect the skin from oxidative stress, while anti-inflammatory properties may help lessen inflammation associated with acne.
Matricin: A precursor to chamazulene, matricin is changed into it during the extraction process. It has anti-inflammatory properties. Luteolin, quercetin, and patuletin are examples of flavonoids.
Flavonoids are antioxidants with potential anti-inflammatory properties.
Coumarins: These substances may possess anti-inflammatory and antioxidant properties.

Mode of Application :
Chamomile Tea: To use a gentle toner, make a cup of chamomile tea and apply it to your skin with a cotton ball. Inhale the ensuing chamomile steam after adding dried chamomile flowers to boiling water. Steam has the ability to open pores and calm the skin.
Uses:
1. Characteristics of Antitumor
2. Antineoplastic Features
3. Antiseptic and Sanitizing Properties.

4. Calendula (Calendula Officinalis):
Kingdom: Plantae (Plants)
Subkingdom: Tracheobionta (Vascular plants) Superdivision: Spermatophyta (Seed plants) Division: Magnoliophyta (Flowering plants)
Class: Magnoliopsida (Dicotyledons)
Subclass: Asteridae
Order: Asterales
Family: Asteraceae (Compositac) The Aster family
Genus: Calendula L..
Species: Calendula officinalis
Vernacular names:
English: Marigold
Indian: Genda" or "GendaPhool

Morphology: Annual or transient perennial herbs. Calendula leaves are lance-shaped and fragrant. The majority of leaves are opposite, simple, and sessile (stemless). The stems are upright with branching tips and can grow up to 60 cm in height. Calendula blooms are complex, consisting of both disk florets (center disk) and ray florets (petals). The fruit

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is an achene, which is a dry fruit with a single twisted seed. calendula's fibrous root system. The flowers are arranged in terminal corymbs, which are clusters that are flat-topped or somewhat rounded. The leaves are simple, spirally arranged, and 5–18 cm (2–7 in) long. They are also slightly hairy. The flower heads have rays and discs.florets and range in color from pastel yellow to deep orange, about 3-5 cm in diameter. The majority of cultivars smell spicy.

Components:

Calendula seeds contain a number of fatty acids, including oleic and linoleic acids. Fatty acids play a major role in maintaining the moisture and barrier function of the skin.

Triterpenoids: Calendula seeds contain triterpenoids such calendulosides and faradiol esters. Triterpenoids are widely recognized for their anti-inflammatory and antioxidant properties.

Calendula is one of several plants that contain flavonoids, which are polyphenolic compounds. The se compounds may have antioxidant effects and contribute to the plant's overall therapeutic characteristics. that include

Carotenoids: Calendula's vibrant orange and yellow colors are attributed to its carotenoid pigments. Carotenoids contain antioxidant properties and are beneficial to skin health.

Saponins: These are compounds that can produce foam.

Mode of Application:

Tinctures: After being diluted with water, calendula tinctures are administered topically to the skin.

Creams and Ointments: Apply calendula lotions or ointments right away to the affected skin region. Consult the product's packaging for more instructions.

Infused Oil: Calendula oil is commonly used topically for skin care. Immediately after application, gently massage the infused oil into the affected area of the skin.

Uses:

1. Reduced Inflammation
2. Properties of Antimicrobials
3. Calming Sensitive Skin
4. Hydrating.

5. Liquorice (Glycyrrhiza labral):

Kingdom: Plantac (Plants)
Subkingdom: Tracheobionta (Vascular plants)
Superdivision: Spermatophyta (Seed plants) Division: Magnoliophyta (Flowering plants)
Class: Magnoliopsida (Dicotyledons)
Subclass: Rosidae
Order: Fabales
Family: Fabaceac (Legume family)
Genus: Glycyrrhiza
Species: Glycyrrhizaglabra
Vernacular name:
English-Licorice, Sweet Root

Morphology:

The licorice plant, Glycyrrhiza glabra, belongs to the Fabaceae family and is a perennial herbaceous plant. The most valuable part of the licorice plant is its long, meaty, branching taproot. Glycyrrhizin and other compounds in the roots give licorice its characteristically sweet flavor. Licorice has tall, spreading stalks that can grow up to 1.5 meters in height. Typically, the stems are covered in tiny hairs. The pinnate complex leaves of licorice are composed of many leaflets arranged along a central axis.

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Roots: The part of the licorice plant that is most frequently used for its medicinal properties is the underground part, particularly the roots.

Components:

The primary bioactive component responsible for the sweetness of licorice root is glycyrrhizin. Glycyrrhizin should be used sparingly since, despite its many health benefits, prolonged use may have adverse effects.

Glabridin: This chemical has been studied because of its potential antioxidant and skin-brightening properties.

Liquiritin: Known for treating hyperpigmentation and dark spots on the skin.

Mode of Application:

Liquice extract is one of the spot treatments that can be applied right away to problematic areas, such pimples or areas with hyperpigmentation.

Licorice powder or extract can be added to homemade face masks by mixing it with other health-promoting ingredients like clay, yogurt, or honey.

Uses:

1. Diminished Effect of Inflammation
2. Regulating the Sebum Production
3.The skin becomes more radiant.
4. Properties of Antimicrobials
5. Calm Features.

6. Aloe Vera

Kingdom: Plantae
Division (Phylum): Angiosperms (flowering plants)
Class: Monocots
Order: Asparagales
Family: Asphodelaceae
Subfamily: Asphodeloideae
Genus: Aloe
Species: vera
Common Names:
English: Aloe vera
Indian: Gheekumari, Khorpad

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Morphology:
Aloe vera is usually 60–100 cm tall (about 2–3 feet).It grows golden-yellow tubular flowers on a tall, thin stalk called an inflorescence. Flowers are grouped in a raceme (a long, unbranched cluster). Aloe vera doesn't have a real stem. Instead, it's called stemless or stem-succulent because it has a very short base.

Aloe Vera Gel:
Found inside the thick leaves.
Appearance: Thick, clear, slightly yellowish.
Uses: Widely used in skincare, medicine, and cosmetics because it cools, hydrates, and helps skin heal.

Components :
1. Polysaccharides – Help skin heal and repair.
2. Anthraquinones (like aloin, emodin) – Natural laxatives, also fight bacteria.
3. Enzymes (like bradykinase, amylase) – Reduce inflammation and support healing.
4. Vitamins (A, C, E) – Antioxidants that protect skin from damage.
5. Minerals (zinc, copper, magnesium) – Help skin stay healthy and renew.
6. Amino acids – Build collagen and repair skin.
7. Lignins – Help aloe penetrate deeper into the skin.
8. Saponins – Clean skin and kill germs.
9. Plant sterols (campesterol, lupeol) – Reduce swelling and calm the skin.
10. Glycoproteins – Reduce pain, swelling, and help new cells grow.

Mode of Application:
For Acne & Dark Spots:Wash your face.Apply a thin layer of fresh aloe vera gel to the affected area.Gently massage and leave it on.Use twice daily for best results.
For Face Masks:Mix aloe vera gel with yogurt, honey, or turmeric.Apply to clean skin.Leave for 15–20 minutes and rinse.
Uses:
1. Reduces inflammation (swelling, redness).
2. Fights bacteria.
3. Speeds up wound healing.

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7. Neem (Azadirachta indica):

Kingdom: Plantae
Clade: Angiosperms (flowering plants)
Clade: Eudicots
Order: Sapindales
Family: Meliaceae
Genus: Azadirachta
Species: indica
Common Names:
English: Neem
Indian: Neem

Morphology:

Neem is a medium to large evergreen tree.Grows 15–20 meters (49–66 feet) tall or more.Leaves are pinnate (feather-like), arranged alternately, and each leaf usually has 8–15 small leaflets.Flowers are small, white, and fragrant, growing in clusters called panicles.Fruits are oval drupes (like small olives).
Unripe: Green
Ripe: Yellow

Chemical Components:

1. Azadirachtin – Powerful insect repellent; also antibacterial and anti-inflammatory.
2. Nimbidin – From neem seeds; reduces redness and irritation.
3. Nimbin – Helps reduce swelling and calm inflamed skin.
4. Nimbolide – Fights acne-causing bacteria and reduces inflammation.
5. Quercetin – Antioxidant and anti-inflammatory; protects skin from damage.
6. Fatty Acids (oleic, linoleic, palmitic) – Moisturize skin and help control oil.
7. Vitamins & Minerals – Rich in Vitamin E, which protects skin and promotes healing.

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Mode of Application:
Neem Oil: Neem oil is very strong, so always dilute it before use.
Mix a small amount of neem oil with coconut, almond, or jojoba oil.
Apply to affected skin with a cotton ball or fingertips.
Neem Leaf Paste:
Crush fresh neem leaves into a paste (or use neem powder with water).
Apply directly to acne-prone areas.
Leave for 15–20 minutes, then wash off.

Uses:
1. Kills bacteria (antimicrobial).
2. Reduces swelling& redness (anti-inflammatory).
3. Protects skin from damage (antioxidant).
4. Controls excess oil production.

8. Turmeric (Curcuma longa):
Kingdom: Plantae
Division (Phylum): Magnoliophyta (flowering plants)
Class: Liliopsida (monocots)
Order: Zingiberales
Family: Zingiberaceae (ginger family)
Genus: Curcuma
Species: Curcuma longa
Common Names.
English: Turmeric
Indian: Haldi

Morphology:
Turmeric is a perennial herb (lives for more than 2 years) with a soft, non-woody stem.
Leaves are large, long, and lance-shaped (pointed) — about 1–1.5 feet long — and grow alternately on the stem.
The stem is actually a rhizome (thick underground stem) that grows sideways.
Flowers are yellow-white and grow in clusters called spikes, coming from leafy bracts.
The rhizome is the main part used as a spice and in medicine — it's thick, tuber-like, and knobby.

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Chemical Components:

1. Curcumin – Kills bacteria (including acne-causing bacteria Propionibacterium acnes).
2. Turmerones (Ar-turmerone, Turmerone) – Reduce inflammation; found in turmeric essential oil.
3. Flavonoids – Protect skin from damage by acting as antioxidants.
4. Zingiberene – A natural compound that helps reduce inflammation.

Mode of Application:

Turmeric Paste:Mix turmeric powder with water, honey, yogurt, or aloe vera.Apply to acne-affected areas.Leave for 15–20 minutes, then rinse.Use a few times a week.

Turmeric + Coconut Oil:Mix turmeric powder with coconut oil to make a paste.Apply to acne-prone areas.Leave for 10–15 minutes, then rinse.Repeat several times a week.

Uses:

1. Reduces inflammation (calms redness & swelling).
2. Kills bacteria (antimicrobial & antibacterial).
3. Lightens dark spots (reduces hyperpigmentation).
4. Helps skin heal & renew (supports cell regeneration and gentle exfoliation).

9. Tulsi (Ocimum tenuiflorum or Ocimum sanctum):

Kingdom: Plantae
Division: Magnoliophyta (flowering plants)
Class: Magnoliopsida (dicots)
Order: Lamiales
Family: Lamiaceae (mint family)
Genus: Ocimum
Species: Ocimum tenuiflorum or Ocimum sanctum
Vernacular Names:
English: Holy Basil
Indian: Tulasi, Tulsi

Morphology:

Tulsi is an upright, herbaceous plant that typically grows 30–60 cm in height.
Leaves: Usually oval or elliptical, with varying shapes; emit a strong aromatic fragrance when crushed.
Stem: Square-shaped in cross-section (a characteristic of the mint family).
Flowers: Small, arranged in terminal spikes.

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Roots: Fibrous root system.
Fruits: Small nutlets, each containing about four seeds.

Chemical Constituents:

1. Eugenol – Antibacterial (fights acne-causing bacteria) and anti-inflammatory (reduces swelling).
2. Ursolic Acid – Anti-inflammatory; minimizes redness and swelling.
3. Apigenin – Anti-inflammatory and antioxidant; soothes irritated skin.
4. Linalool – Antibacterial and anti-inflammatory; helps prevent acne.
5. Ocimene – Antibacterial; inhibits harmful skin bacteria.

Mode of Application:

Tulsi Paste:Crush fresh Tulsi leaves into a paste. Apply directly to affected skin. Leave for 15–20 minutes, then rinse with water.
Tulsi Face Mask:Mix Tulsi powder with water, honey, or yogurt to form a paste. Apply evenly to the face. Leave for 15–20 minutes, then rinse.

Uses:

1. Antimicrobial properties
2. Anti-inflammatory effects
3. Antioxidant protection
4. Skin-soothing action
5. Oil-control benefits.

II. CONCLUSION

Natural treatments for acne present a viable substitute, frequently utilizing the effectiveness of dietary adjustments, lifestyle alterations, and botanical extracts. Green tea, Echinacea purpurea, and other herbs utilized in this treatment have antibacterial and anti-inflammatory qualities. In summary, reviewing acne entails a comprehensive study of its causes, including evidence-based therapies, and investigating natural cures that are customized for each patient. This all-encompassing strategy has the potential to address the root causes of acne in addition to its outward manifestations, ultimately resulting in stronger, healthier skin.

REFERENCES

[1]. Koushik OS, Ravisankar P. Ramesh Himaja V. J. Pragna P. Acne causes and fantastic acne treatments. 2015, J Pharm Res. 5:209-301.
[2]. AK M. A thorough analysis of acne vulgaris. Pharm. J. Clin. 2019;1(1):17–45.
[3]. Jadhav RN, Deshmukh AS, Nunse DK. Treatments for Skin Pigmentation Disorders. 12(2): 07-19, International Journal of Pharmacy and Biological Sciences, 2022.
[4]. History of rosacea and acne Plewig G. Melnik B. Chen W. Plewig G. Melnik B, Chen W. Rosacea and Acne by Plewig and Kligman, 2019:609-58.
[5]. Wang SY, Tien YJ, Tsai PW, Shyur LF, Hou CC, Chen CH, Yang NS, Chen YP, and Lo CP. Cell-and gene-based assays in conjunction with a comparative metabolomics approach are used to classify taxa and validate the anti-inflammatory bioactivity of Echinacea plants. Nutritional Biochemistry Journal, November 1, 2010, 1:21(11):1045-59
[6]. Hosen MB. Billah MM. Niaz K. Echinacea Khan F. Nutritional supplements that are not vitamins or minerals. 2019 Jan 1:205-10.
[7]. Manayi A, Vazirian M. Reviews on Echinacca Pharmacognosy and Pharmacology of Sacidnia S. purpurea.
[8]. 2015 Jan; 9(17):63. Pratheepa V. Manivannan E. Moorthy NS. medications made from natural products for inflammatory and immunological conditions. Clinical Trials of Natural Products, March 3, 2018 3:48:31-78.

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[9]. Korać, R. R., & Khambholja, K. M. (2011). Potential of herbs in skin protection from ultraviolet radiation. Pharmacognosy Reviews, 5(10), 164–173. https://doi.org/10.4103/0973-7847.91114

[10]. Akinmoladun, F. O., Akinrinlola, B. L., & Komolafe, T. O. (2015). Medicinal plants with anti-acne potential: A review of their mechanisms of action. African Journal of Traditional, Complementary and Alternative Medicines, 12(5), 1–13. https://doi.org/10.4314/ajtcam.v12i5.

[11]. Reuter, J., Merfort, I., & Schempp, C. M. (2010). Botanical anti-inflammatory agents for skin disease. Skin Pharmacology and Physiology, 23(2), 74–80. https://doi.org/10.1159/000288847

[12]. Zaenglein, A. L., Pathy, A. L., Schlosser, B. J., Alikhan, A., Baldwin, H. E., Berson, D. S., et al. (2016). Guidelines of care for the management of acne vulgaris. Journal of the American Academy of Dermatology, 74(5), 945–973.e33. https://doi.org/10.1016/j.jaad.2015.12.037

[13]. Dreno, B., Layton, A. M., Zouboulis, C. C., et al. (2018). Understanding innate immunity and inflammation in acne: Implications for management. Journal of the European Academy of Dermatology and Venereology, 32(12), 2031–2040. https://doi.org/10.1111/jdv.15190

[14]. Zouboulis, C. C., & Eady, A. (2021). Historical perspective and current understanding of acne pathogenesis and treatment. Clinics in Dermatology, 39(1), 1–9.

[15]. Dreno, B., Gollnick, H. P., Kang, S., Thiboutot, D., & Bettoli, V. (2015). Understanding the pathophysiology of acne. Journal of the European Academy of Dermatology and Venereology, 29(Suppl. 5), 1–7. https://doi.org/10.1111/jdv.13203

[16]. Schulten, B., Büschel, G., Rüffer, M., & Müller, W. E. (2001). Echinacea purpurea root extract stimulates phagocytosis and increases intracellular killing of Staphylococcus aureus by human granulocytes. Phytomedicine, 8(6), 459–465. https://doi.org/10.1078/0944-7113-00066

[17]. Yoon, J. H., Baek, J. H., Cha, J. H., & Kim, H. S. (2013). Green tea polyphenol (−)-epigallocatechin-3-gallate inhibits acne vulgaris-associated inflammatory responses in human sebocytes and keratinocytes. Journal of Investigative Dermatology, 133(2), 429–440.

[18]. Mahmood, T., Akhtar, N., & Khan, B. A. (2010). The morphology, characteristics, and medicinal properties of Camellia sinensis' leaves and the effects of its polyphenols in treating acne vulgaris. Bosnian Journal of Basic Medical Sciences, 10(2), 139–144.

[19]. Red plants' botanical classification and therapeutic qualities are used in medicine by Akbarov and Matkarimova gm. 2-1 (81):35-7, Economy and Society, 2021.

[20]. Glycyrrhizin's effects on the hepatitis B surface antigen: a biochemical and morphological investigation Takahara T, Watanabe A, Shiraki K. Hepatology Journal, 1994 Jan 1:21(4):601-9.

[21]. Licorice root, Kitagawa I. An essential component of Chinese medicine and a natural sweetener. applied and pure. Chemistry, January 1, 2002, 1:74(7), 1189-98.

[22]. Takagaki R. Takahashi K. Demizu S. Kajiyama K. Hiraga Y. Kinoshita T. Okada K. Tamura Y. Yamamoto M. Inoue Y. Identification of antioxidant and antibacterial components in licorice from Xinjiang and Ussian origins. Bulletin on Chemical and Pharmaceuticals, September 25, 1989, 25:37(9):2528-30.

[23]. Red plants' botanical classification and therapeutic qualities are used in medicine by Akbarov and Matkarimova gm. 2-1 (81):35-7, Economy and Society, 2021.

[24]. Glycyrrhizin's effects on the hepatitis B surface antigen: a biochemical and morphological investigation Takahara T, Watanabe A, Shiraki K. Hepatology Journal, 1994 Jan 1:21(4):601-9.

[25]. Licorice root, Kitagawa I. An essential component of Chinese medicine and a natural sweetener. applied and pure. Chemistry, January 1, 2002, 1:74(7), 1189-98.

[26]. Takagaki R. Takahashi K. Demizu S. Kajiyama K. Hiraga Y. Kinoshita T. Okada K. Tamura Y. Yamamoto M. Inoue Y. Identification of antioxidant and antibacterial components in licorice from Xinjiang and Ussian origins. Bulletin on Chemical and Pharmaceuticals, September 25, 1989, 25:37(9):2528-30.

[27]. Al-Harrasi, Abbas G. Green IR, Hussain H. Khiat M. Khan HY, and Rehman NU Aloe resin's bioactive chemical components Zeitschriftfür Naturforschung B. 2017 Dec 20:72(12):955-8. vera.

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[28]. PB Setiawan. Vani AT. Febrianto By Septiana VT. The impact of aloe vera facial soap and gel on the severity of vulgaris acne in SMA Negeri 2 Bayang students. The Journal of EduHealth, September 20, 2020, 11(1), 39–47.

[29]. Arshad M. Gul J, Ullah S. Saddam M, Jamil M. Mansoor M. Latif N. Naz R. Anwar F. Review of Aloe Vera's Impact on Wound Healing: Review of Aloe Vera's Impact on Wound Healing. March 18, 2020, Biological Sciences-PJSIR, 18:63(1), 48–61

[30]. Shinwari ZK, Zafar M, Ahmad M. Bano A, Sultana S. Khan MA. Using pharmacognostic and taxonomic methods, the herbal remedy neem (Azadirachta indica A. Juss.) is authenticated. Journal of Botany in Pakistan, Dec. 1, 2011, 1:43:141-50. Munoz-Valenzuela

[31]. Rubio-Silva LM, S. Ibarra-Lopez AA, and Valdez-Davila Borboa-Flores J. Neem tree oil and morphology problem with new crops and new applications. 2007:126.

[32]. A review of the chemical components and traditional uses of the neem plant (Azadirachta indica) was conducted by Eid A. Jaradat N. Elmarzugi N. 2017; 2(2):3; Palestinian Medical and Pharmaceutical Journal.

[33]. Roy, Singh V. Garg, M. Kumar, N. Arora, A. Malik, S. DS. An overview of the historic and contemporary aspects of neem's dermatological uses. New Developments in the Discovery of Anti-Infectious Drugs Recently issued patents pertaining to the discovery of anti-infective drugs. Aug. 2021 1:16(2):94–121.

[34]. Aneesa N. Neem oil's health benefits: An expanded review. Aug. 2016, 1:8(8):756; Journal of Pharmaceutical Sciences and Research.

[35]. Jadhav SK, Tiwari KL, Behar N. A review of Curcuma caesia Roxb, a non-traditional kind of turmeric. 2014; 8(1):91-101; Current Trends in Biotechnology and Pharmacy.

[36]. Uthaiah BC, Indiresh KM. The morphological, rhizome, and yield characteristics of many turmeric varieties in coastal Karnataka were examined by Herle PS. Rao KB. 1990:24(4):484-90 Mysore Journal of Agricultural Sciences

[37]. Niranjan A. Prakash D. A review of turmeric's (Curcuma longa L.) chemical components and biological activity. Food Science and Technology Journal, March 1, 2008, 1:45(2), 109.

[38]. Topical herbal remedies are a supplemental and alternative option, according to Kapoor S. lataSaraf S. Journal of Medicinal Plant Research, 5(3), 2011: 650-69. A review of turmeric, curcumin, and curcuminoids in dermatology by Kim L. Lio P.

[39]. Nahak G. Mishra RC. Sahu RK. Ocimum (tulsi): Taxonomic distribution, therapeutic qualities, and potential for drug development. Drug Innovation Today. June 1, 2011:3 (6).

[40]. Saha, Kumar R. Lokare, P. Selvakumar P. Chourasia A., P. Datta K. A Comprehensive Analysis of Ocimum sanctum (tulsi): Phytoconstituents, Morphological Features, and Therapeutic Uses. International Journal for Research in Biotechnology and Applied Sciences. Apr. 7, 2022, 7:9(2):221-6.

[41]. Chaudhuri PK, Singh D. An overview of holy basil's (Ocimum sanctum L.) pharmacological and phytochemical characteristics. August 1, 2018; Industrial Crops and Products, 1:118:367-82. Ocimum sanctum: A natural remedy, by Deshmukh AS. Deshmukh GB. Shirole PD. 2015;2(12):550-9, International Journal of Pharmacognosy.

[42]. Sundriyal A, Bahuguna Y, Syan J. Bhatt B, Tailor CS. A review of a herbal face pack is presented in Herbal Cosmetics. 2022:0976-97; Indian Journal of Natural Sciences.

[43]. Vora J, Srivastava A, Modi H. Plant extracts as antibacterial and antioxidant methods for acne treatment. Medical Informatics Unlocked. January 1, 2018 1:13:128–32.

[44]. Arnoldia. 1976 May 1:36(3):69-109, Weaver RE. The witch hazel family (Hamamelidaceae).

[45]. Binka K. Parrotia persica CAM (Persian witch hazel, Persian ironwood) in the Mazovian (Holsteinian) Interglacial of Poland, Nitychoruk J, Dzierz ewicz J. Dec. 2003, Grana, 1:42(4):227-33.

[46]. Thring TS. Naughton DP Hili P. White tea, rose, and witch hazel extracts and formulations have antioxidant and maybe anti-inflammatory effects on primary human dermal fibroblast cells. Dee:8:1-7, Journal of Inflammation, 2011.

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Impact Factor: 7.67

[47]. PJ's margin. Adams J, Pond CD, Smith W. A review of the empirical evidence and an analysis of its context for topical and oral CAM in acne. Medicine's use of complementary therapies. 2006 Mar 1:14(1):62-76.

[48]. S. Martinelli Piazza U. G. Vrhovsek, Masuero Fumagalli, D. Magnavacca, M. Pozzoli, A. Terno, C. Canilli L. Angarano, M. M. Dell'Agli M. Hamamelis virginiana bark's anti-inflammatory and anti-acne properties in human keratinocytes. Jun. 2022, 5:11(6):1119; Antioxidants.

[49]. Tuchinda P, Chularojanamontri 1. Pongparit K. Kulthanan K. What ingredients are in acne moisturizers? Clinical and Aesthetic Dermatology Journal, May 2014, 7(5):36.