

## The Historic Panorama of Acne Vulgaris

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**Abstract** Although acne is described in very ancient writings dating back to Eber's Papyrus, its clear description is found after Fuch's coined the term 'Acne Vulgaris' and Erasmus Wilson separated it from acne rosacea. The early treatment of acne was based upon the witchcraft. Later new therapies got evolved with the discoveries in the field of anatomy, physiology and biochemistry. The following review focuses the historical overview of acne vulgaris, highlighting persons and discoveries in medieval and modern period.

**Keywords** *Acne Vulgaris, Busoore Labaniya, Greco-Arabic Medicine*

### 1. Introduction

Acne is the most common infuriating skin disorder for dermatological consultation affecting all age groups and races [1]. It usually involves face but may also affect back and chest of the individual. It is characterized by non inflammatory and inflammatory lesions viz. open and closed comedones, papules, pustules, nodules and occasionally cysts [2]. Severe acne is associated with permanent scarring with abiding psychosocial distress encompassing negative impact on mood, self esteem and other quality of life parameters [3]. It usually affects the young people at an age when they are most sensitive to any disfigurement [4]. The worldwide cost for acne treatment was calculated as 12.6% of overall costs for dermatological treatments [5]. It has been averred that in America, more than 5 million dermatological consultations are made by acne patients annually that contribute to an annual loss of \$2 million [6].

Acne is well known since ancient times and is avowed to affect people even before humans could write [7, 8]. Since it has a long history, hence is now known as one of the world's most common skin disorder. From the oldest, and older, acne breakouts are contemplating a contagious skin state that can ruin the complexion of the individual [7]. The roots of acne have been traced all the way to three well known ancient civilizations viz, Egyptians, Greeks and Romans.

## 2. Acne in Ancient Egypt

Some Egyptian writings have mentioned that Pharaohs suffered from acne and had also made efforts to resolve it. Many stories and superstitious beliefs were related to the cause, clinical presentation and treatment of the acne breakouts. Those were accustomed to magic, spells and charms to drive it [7, 8]. In Ebers Papyrus the word 'aku-t' is cited that was later translated as 'boils, blains, sores, pustules or any inflammatory swelling' and is described to be treated with some animal origin preparations and honey [9]. Ancient Egyptians around 3<sup>rd</sup> century were of the opinion that acne is caused by telling lies [7]. Tutankhamun, Egyptian Pharaoh of the 18th dynasty who ruled during the period between 1332 BC - 1323 BC, had acne as evident from the anti acne remedies in his tomb [4].

## 3. Acne in Ancient Greek

The earliest description of acne appeared in the ancient Greek writings of the Byzantine physician Aetius Amidenus [10]. The word 'acne' appears to evolve from Greek word 'acme' which means 'point or spot' [11]. Several writers were of the opinion that it originated from a Greek work meaning 'anything that comes off the surface'. From the historical records, both Hippocrates and Aristotle were aware of this illness. Aristotle also explained this condition in detail. The ancient Greeks knew acne as 'tovoot'. According to the meaning of this word in the singular as 'the first growth of the beard' hence it was associated with puberty. In 2 AD the meaning of acne appeared to be widened to include the height or apogee of growth and development and thus 'puberty'. It is in this meaning that it first appeared in relation to 'tovoot' in the works of Greek rhetorician Julius Pollux. The early Greeks also confined the words 'ionthoi' and 'vari' to puberty. Later in 7 AD Palus Aegineta, last of the Greek compilers in the Byzantine period, favouring the views of Galen regarding the 'ionthoi' and recommended honey for softer lesions and a mixture in soap base for harder ones [9].

## 4. Acne in Ancient Rome

Ancient Romans has guided initial treatment of acne [7]. In ancient Rome, acne was treated with baths as people there believed that the pores of the skin may be lifted and cleaned with a mixture of sulfur in the mineral baths [7, 8]. Aulus Cornelius Celsus (25BC- 50BC), a Roman encyclopaedist, has mentioned about this treatment in his extant medical work *De Medicina* [8]. Cassius in 3 AD interpreted that since this disorder is related to puberty, it is known by the name of 'akmas' [9]. In the 4<sup>th</sup> century AD, the court physician of Theodosius advised acne victims to wipe their "pimples" with a cloth while watching a falling star and the pimples would then 'fall from the body' [4]. Pliny and Celsus used the word 'varus' to elucidate this ailment. Until 5 AD, the word acne was considered as misrepresentation of 'acme'. Aetius, an emperor Justinian's physician, used the word acne for the first time after asserting that 'acme' was a misprinting. Galen was the first to suggest that 'ionthoi' might comprise more than one disorder and suggested different preparations for the two types of 'ionthoi' based upon consistency of nodules [9].

## 5. Acne in Greco-Arabic Medicine

Renowned Greco-Arabic (Unani) scholars have described a dermatological condition '*Busoore labaniya*' in their exemplary texts with clinical resemblance to present day 'acne vulgaris'. Rabban Tabari (770-850 AD) in his legendary treatise 'Firdous al Hikmah' (*Paradise of Wisdom*) explicated a vivid description of Sebaceous glands [11]. Sabit Bin Qurrah (836-901 AD) has described various formulations for treatment of small eruptions (*funs*) over the face [13]. Zakariya Razi (850-923 AD) also known as Rhazes explained treatment of *Busoore labaniya* (acne) appearing over the face and nose in his prodigious text *Al Hawi (The Virtuous Life)* [14]. Ibn Sina (980-1037) also known as

Avicenna in his legendary text 'Al Qanoon Fil Tib' (*The Cannon of Medicine*) has depicted the etiopathogenesis and clinical presentation of *Busoore labaniya* (acne) [15]. Ibn Hubl (1122-1213) transcribed in his treatise 'Kitab al Mukhtarat Fil Tib' (*The selected or choice book in medicine*) the clinical presentation and cause of *Busoore labaniya* (acne vulgaris) [16]. Abu Al Hassan Al Jurjani (12<sup>th</sup> century AD) in his monumental omnibus 'Zakira Khawarizam Shahi' (*Thesaurus of the Shah of Khawarazam*) has described the etiology of eruptions over the skin surface [17]. Dau'd Antaki (1541 AD died 1599) also referred as David of Antioch in his historic text 'Tazkirah oolil albab' has revealed the humoral cause of acne [18]. Akbar Arzani (1772 AD) and Hkm Azam Khan (1813-1902 AD) have distinctly expounded the clinical presentation of acne in their texts 'Tibe akbar', 'Meezan al tib' and 'Akseer azam' [19-21].

## 6. Acne in Elizabethan era

In the Elizabethan era (1558–1603), the appearance of women was given primordial importance. An extremely pale complexion was an indication of the elite and hence women began acquainted to the use of layers of Venetian Ceruse, a thick, white lead based paint that provided a perfect breeding ground for acne. Acne at that time was also contributed to witchcraft. For the management of these pimples, different type of mercury make up was also in use. The caustic mercury erodes the flesh. Hence forth, people restored to the sulfur treatments of antique times [10]. Daniel Sennert (1572-1637), quoting the views of Theocritus and Rhodiginus, dealt with acne and rosacea under the same heading [9].

Riolanus and Jonston associated acne with disorders of menstruation in 1638 and 1648 respectively. Jonston (1648) also linked acne with heterosexual behaviour pattern in a manner very close to present day psychosomatic ideas on the subject. He also quoted that 'Vari are tiny hard tumours on the skin of the face curdled up of a hard thick juice. They are about the size of a hemp seed, and they infect young people, who are inclined to venery and fruitful, but chast withal and continent' [9].

Daniel Turner in 1714 quoted that most physicians of the time considered the treatment of such minor conditions beneath their dignity, but in the latter half of the century management of these diseases became popular. Sauvages following the ideas of the Theocritus, Rhodiginus and Sennert approached to the problem and was doubtful about including the Gutta Rosae of wine bibbers in the same category as ordinary acne. In 1783, Plenck subdivided the Gutta Rosacea (or Rosae) into nine types. Willan (1778-1821) and Bateman (1757-1812) divided the acne in the view of 'ionthoi' or 'vari' into three types: simplex, punctata and indurate according to the type of lesions. They were of opinion that the fourth member of this group is the Gutta Rosea or Gutta Rosacea of the ancient physicians and called it 'acne rosacea'. These also explained the essential differences between acne rosacea and other three members of the group. The first three conditions were considered as local lesions and treated with topical medicaments while as acne rosacea was regarded as a symptom of functional disorders of liver or stomach [9].

In the next few decades the literature on acne became voluminous with contrasting views especially on the subject of classification and nomenclature. There were arguments in relation to the primary lesion of acne; either it is pustule or papule; whether all pustular conditions over the face should be called acne; whether it was necessary for any lesion to have a red areola for it to qualify for the name acne and so on. In 1840 AD, Fuchs used the term 'Acne vulgaris' for the first time and divided acne into acne vulgaris, acne mentagra and acne rosacea [9]. In 1842, Erasmus Wilson separated acne simplex (acne vulgaris) from acne rosacea [22].

Baumes' P. in 1842 AD enlisted the predisposing factors that were mentioned by writers of that period viz., constitutional factors, mode of life, and use of cosmetics, affections of the alimentary tract, menstrual abnormalities and supposedly abnormal sexual behavior [9]. In the same year Gustav Simon, put forward his views that the disease primarily involves hair follicle and was also among the first ones to discover the 'acarus' or 'Demodex folliculorum' which he thought might be an etiological factor. The views of Gustav Simon were later disproved by Erasmus Wilson (1809-1884). In supporting the opposing view that the sebaceous glands were disordered, he referred to the normal lubrication of the skin by the sebum and stated 'But in the inhabitants of cities and towns in the midst of the sedentary and irregular habits of refined society, and of the mental wear and tear of practical life, such a state of the unctuous system of the skin as I am now describing rarely or never exists' [9].

In 1920, Jack Breitbart of the Revlon Corporation invented benzoyl peroxide for the treatment of acne. Breitbart realized that this product was more effective and smelled better than the sulfur treatments of the past [10]. Around 1930, laxatives were in common use for treatment of acne [8]. In 1950s Tetracycline was for the first time prescribed for acne as it was noticed that acne was caused by bacteria. In 1960s, the topical treatment Retin-A was developed to alleviate acne. Retin-A has produced great results and is still in use [10]. Plewig G and Kligman A M in 1975 disagreed with the FDA's recommendations of sulfur products. They believed that it may aggravate rather than help acne [4]. In 1980s, a novel medication Accutane (Isotretinoin) for acne appeared in the markets of America. It was found extremely effective but severe side effects were also noted viz., stroke, seizure, heart attack and hair loss. Women were advised contraception for up to six months following discontinuation of the therapy [10]. In 1990, laser therapy made its evolvment in treating acne and is now widely used remedy as it clears the recent as well as old scars left by acne besides active lesions. In 2000, the blue/red therapy was developed along with laser therapy for easy treatment of acne [8]. Microneedling with dermaroller emerged as a novel treatment modality for the treatment of acne scars. Orentreich first described subcision or dermal needling in 1995 for scars and most recently, Fernandes, in 2006, developed percutaneous collagen induction therapy with the dermaroller [23]. In 2007, a vaccine against inflammatory acne has been tested successfully in mice, but is yet to be tested in humans [24].

## 7. Conclusion

Acne vulgaris also known as common acne is the most common pattern of acne that usually involves the teenagers. The term "acne vulgaris" implies the presence of micro comedones that contribute to the formation of acne. Finally, Acne is a common annoying skin disorder affecting individuals from ancient ages. Although rarely life threatening, it poses significant psychological morbidity. Henceforth, it is believed that references of this disorder will be present in all civilized communities. Acne has been given paramount importance within cultures and hence it has a history that dates back to prehistoric times at one end and into the 20th century at the other.

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