



# Two eponyms in the histopathology of lichen planus: Creation and confusion

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"Eponyms can be very helpful as much as confusing to the student and researcher."

K Holubar, D Kopera<sup>1</sup>

## Introduction

An *eponym* is "one for whom or which something is or is believed to be named" as defined by the Merriam-Webster dictionary.<sup>2</sup> Hence, an eponym is helpful in remembering origin, evolution, and nature of the entity. If it be so, then why it is sometimes confusing? This article tells about two eponyms and some confusion related with it.

The words *Lichen*, *lepra* and *psora* have been used to denote various ailments since the ancient days of medicine. With the advent of dermatohistopathology most of these diseases have got their unambiguous individuality. In the diagnosis of lichen planus the small clefts at dermo-epidermal junction (*Max Joseph space*) and apoptotic colloid bodies (*Civatte bodies*) have been considered such significant histopathological features that they have become the most widely known dermatopathologic eponyms today. Interestingly, these findings were described by some other authorities ahead of those on whose name present-day eponyms are known. It is not clearly known how and when these eponyms crept into the medical literature.

## From *lichen* to *Lichen Planus*

In 1808, Robert Willan (1757–1812) published his *On cutaneous diseases* and placed *lichen* under the order *papulae*.<sup>3</sup> It is said that Ferdinand Ritter von Hebra (1816–1880) of Vienna named it *lichen ruber* in 1860 [Figure 1].<sup>4,5</sup> Sir William James Erasmus Wilson (1809–1884) in an address entitled *On lichen planus: the lichen ruber of Hebra* in August 1866 at the thirty-fourth annual meeting of the

British Medical Association gave a detailed account and in his sixth edition (1867) treatise *On Diseases of the Skin* (foreword dated 1866) wrote at length about *lichen planus*.<sup>6,7</sup> In 1869, Wilson reiterated his view in a publication with a series of 50 patients.<sup>8</sup> Even after this narrative, etymological confusion between *lichen ruber* and *lichen planus* prevailed. George Henry Fox argued in 1894: "Lichen planus ought never to be confounded with *lichen ruber*. If clinical experience were taken as a guide in place of the dictum of eminent authorities, confusion of these two diseases would be very unlikely to occur."<sup>9</sup>

This perplexity settled with further clinical observation and histopathological knowledge. Among various significant histopathological features to establish the diagnosis of lichen planus Max Joseph space and Civatte bodies were considered important ones.<sup>10,11</sup>

## Max Joseph Space: Whose "space" It Is?

The eponym "Max Joseph space" stands for "the appearance of the liquefaction degeneration of the basal cells and extracellular fluid accumulation about the individual basal cells (that) is strongly suggestive of mild irritation."<sup>12</sup> This is being used in the histopathology of lichen planus for the past 125 years. This was first observed by Caspary (1836–1911) and thereafter by Robinson (1845–1924), but popularly known as Max Joseph space. This evolution took about a decade.

## The Decade After Julius Caspary

In 1888, Prof. Julius Caspary of Königsberg noted the lacunae due to dermo-epidermal separation in the biopsy specimen of *lichen ruber* (planus) in an article entitled: *Ueber lichen ruber* and opined that those were not artificial in origin [Figure 2].<sup>13</sup> Andrew Rose Robinson read a part of a paper on lichen

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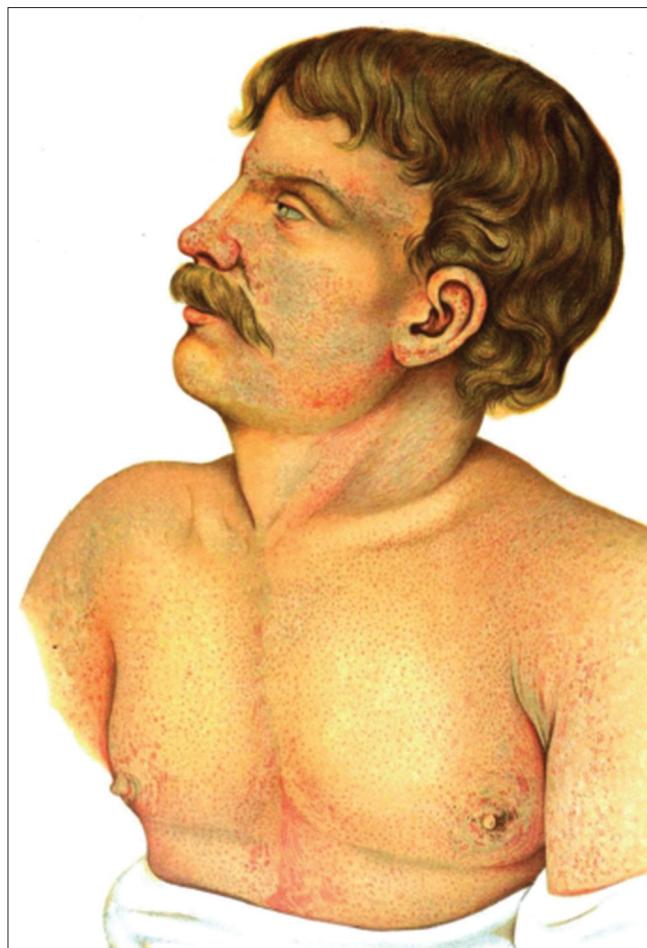


Figure 1: Lichen ruber from *Atlas der Krankheiten* by Barenprung and Hebra, 1867. (Credit: Community Texts (Internet Archive). Source: <https://books.google.com/books?id=OP9aAAAAQAAJ> Attribution only license CC BY 1.0 <http://creativecommons.org/licenses/by/1.0/>)

planus before the American Dermatological Association at the Congress of American Physicians and Surgeons in Washington in 1888. On the next year he published the full account of it. In this paper entitled: *The question of relationship between lichen planus (Wilson) and lichen ruber (Hebra)*, he mentioned about Caspary's work but opined that "... This condition was probably caused by of external irritation (scratching?)."<sup>14</sup>

Almost about a decade later, in 1897, Max Joseph (1860–1932) of Berlin described further this sub-epidermal finding with a pathological significance (and he quoted Pinkus in support of this) in lichen planus and also acknowledged the previous observations of others [Figure 3].<sup>15</sup> In his *Atlas of cutaneous morbid histology* published in 1906 he wrote: ".Since Caspary (Viertelj.f. Dermat.u. Syph., 1888, S. 159) and I (Arch.f. Dermat. u. Syph., 1897, 38 Bd.) called attention to the engorgement vesicle (Touton) the pathological significance of this is universally recognized. Further, F. Pinkus (Arch. f. Dermat. u. Syph., 1902, 60 Bd.) has detected a direct process of epithelial destruction at the boundary of the cutis, a solution of continuity of the uniting epithelial cells through a process of undermining."<sup>16</sup> We do not know when

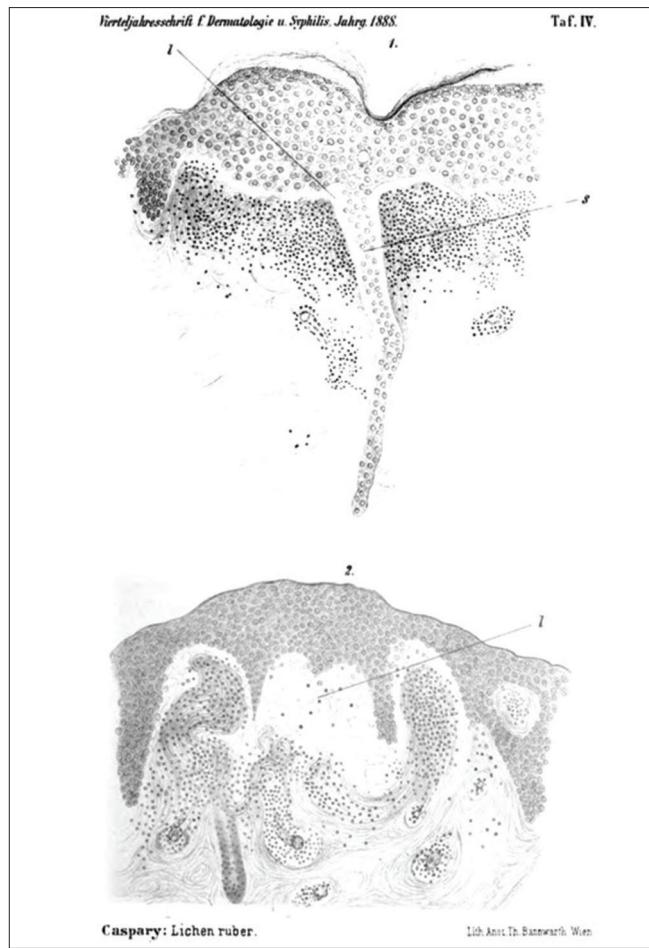


Figure 2: An illustration of sub-epidermal lacunae from Caspary's article 'Ueber lichen ruber' published in *Vierteljahresschrift für Dermatologie und Syphilis*, 1888 (Credit: HathiTrust.org .Source:<https://hdl.handle.net/2027/osu.3>, digitized by Google, Inc.)

it achieved the honor of eponym but became familiar to the dermatopathologist as *Max Joseph space* since then. Another six decades elapsed and one more eponym in the vocabulary of dermatopathology of lichen planus evolved at l'Hôpital Saint-Louis of Paris, France, the birthplace of French school of dermatology where many giants of dermatology worked that included Darier, Sabouraud, and Civatte amongst several others.

#### Achille Civatte and *Corps hyalins*: The Apoptotic Keratinocytes

Civatte bodies, one of the most important features in the histopathology of lichen planus are necrotic keratinocytes in the form of eosinophilic colloid bodies, which are periodic acid–Schiff positive and diastase resistant, and are found in the papillary dermis.<sup>17,18</sup> These structures are variously named as cytid body, hyaline body, colloid body, etc. Despite the use of many synonyms for this single entity, it is almost exclusively known as Civatte body.

Although Civatte described it in lichen planus in 1927 and it became an eponym later, it was noted earlier by

Aus Dr. Max Joseph's Poliklinik für Hautkrankheiten in Berlin.

## Beiträge zur Anatomie des Lichen ruber (planus, acuminatus und verrucosus).

Von

Dr. Max Joseph.<sup>1)</sup>

(Hierzu Taf. I—III.)

Das klinische Krankheitsbild des Lichen ruber ist ein nach allen Richtungen wohl definirtes. Wenn auch im einzelnen noch mannigfache Differenzen bestehen, so herrscht doch im Grossen und Ganzen über das Symptomenbild und die Abgrenzung dieser Krankheit von anderen eine grosse Einigkeit. Nur einige wenige Punkte stehen noch zur Discussion. Im wesentlichen kann man wohl auf allgemeine Zustimmung rechnen, wenn man sagt, es gibt nur einen klinisch als Lichen ruber zu bezeichnenden Krankheitsprocess und dieser zerfällt je nach dem Vorherrschen der einen oder anderen Symptomengruppe in mehrere Unterabtheilungen, welche wir als Lichen ruber planus, acuminatus und verrucosus bezeichnen können.

Ich habe die Absicht in der vorliegenden Arbeit auch durch anatomische Untersuchungen zu zeigen, in welcher engen Zusammengehörigkeit nicht nur diese einzelnen Symptomenreihen, sondern auch die Pityriasis rubra pilaris zum Lichen ruber acuminatus stehen.

Bisher allerdings war über die Anatomie des Lichen ruber nichts weniger als eine Uebereinstimmung unter den einzelnen Forschern erzielt worden. Die von jedem Untersucher

<sup>1)</sup> Nach einem auf dem III. internat. Dermatologen-Congress zu London (1896) gehaltenen Vortrag.

nehmen, welche Unna wegen der Proliferation der die Knäuel umgebenden Bindegewebszellen hypothetisch annimmt.

Der einzige, welcher ähnliche anatomische Befunde beim Lichen ruber planus erhoben hat, ist Caspary.<sup>1)</sup> Er fand in den jüngsten Knötchen als erste Erscheinung beginnende Zellinfiltration in den obersten Cutisschichten und in dem vorgeschrittenen Knötchen ziemlich regelmässig eine Abhebung des ganzen Epidermidalstratum, entstanden durch Zerfall und Schwund des weithin infiltrirten subepithelialen Bindegewebes. Auch in seinen Präparaten war ebenso wie in meinen diese Lücke durch ein glasiges, von feinen fibrinähnlichen Fäden durchzogenes Gerinnsel ausgefüllt, in dem sich spärliche Rundzellen befanden. Später hat auch Robinson (Journ. of cutan. and genito — urinary diseases. Febr. 1889) diese Lückenbildung als „mikroskopische Bläschen“ (p. 48 Fig. 5) beim Lichen ruber planus abgebildet. Diese von Caspary zuerst<sup>2)</sup> beschriebene Lücke konnte ich in allen meinen Präparaten wiederfinden. Nur möchte ich in der Deutung etwas von Caspary abweichen. Ich habe diese Lücke schon in dem soeben beginnenden Knötchen gefunden, bevor in dem Papillarkörper auch nur eine nennenswerthe Infiltration vorhanden war. Auch beim Lichen ruber verrucosus finde ich diese Abhebung angedeutet, und aus der dieser Arbeit beigegebenen Tafel II, Fig. 2 ist ersichtlich, dass auch hier die Lücke schon vorhanden ist, während das Infiltrat im Papillarkörper nur erst sehr gering ausgebildet ist und noch lange nicht die Dimensionen angenommen hat, welche wir bei älteren Knötchen so häufig sehen.

Ich habe mir nach meinen Befunden den Vorgang so gedacht, dass zunächst eine Erkrankung der Gefässe und eine perivasculäre Infiltration in der Tiefe des Coriums sich einstellt. Dadurch werden Ernährungsstörungen in dem Rete hervorgerufen, es erfolgt eine Exsudation, welche zum Zerfälle des

<sup>1)</sup> Vierteljahrsschr. f. Dermat. u. Syph. 1888 p. 159.

<sup>2)</sup> Caspary sagt zwar in seiner Arbeit, dass diese Befunde schon von Anderen vereinzelt notirt wurden. Ich habe aber bei meinen auf meinen Punkt gerichteten Literaturstudien nichts sicheres darüber aufzufinden können.

Figure 3: The first page and eighth page (mentioning works of Caspary and Robinson) of the article Beiträge zur Anatomie des Lichen ruber (planus, acuminatus und verrucosus). by Max Joseph in Archiv für Dermatologie und Syphilis, 1897. (Credit: Wellcome collection. Attribution: <https://creativecommons.org/publicdomain/mark/1.0/>. Source: <https://archive.org/details/s6550id1398067/>)

Ferdinand-Jean Darier (1856–1938) in his *Précis de dermatologie* published in 1909 where he wrote: *Dans le corps papillaire se trouve, un infiltrat diffus, composé de petites cellules rondes; quelques-unes d'entre elles et parfois quelques cellules malpighiennes peuvent être en état de dégénérescence colloïde.*<sup>19</sup> This account of *cellules rondes* (round cells) undergoing *dégénérescence colloïde* (colloid degeneration) was almost certainly the earliest description of Civatte bodies [Figure 4]. Again, in 1910 Raymond Jacques Adrein Sabouraud (1864–1938) in his *Sur quelques points de l'anatomie pathologique du lichen plan de Wilson* described more elaborately the colloid degeneration (*dégénérescence colloïde*) of cells in the Malpighian layer in lichen planus.<sup>20</sup> In 1922 Achille Civatte (1877–1956)

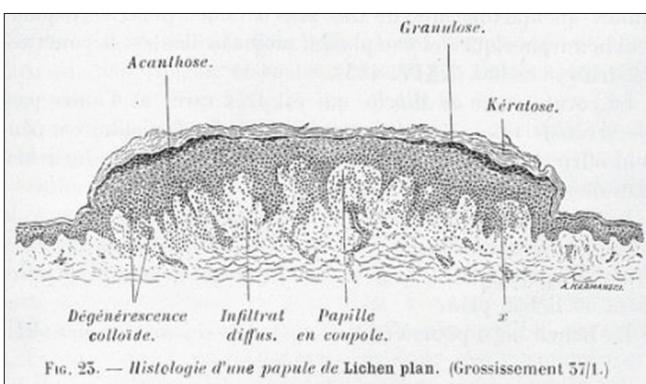


Figure 4: An illustration of colloid degeneration in a biopsy section of lichen planus. (Source: Darier J. Précis de dermatologie, 1909. Credit: "Source gallica. bnf.fr/Bibliothèque nationale de France")

noted the presence of colloid bodies in *poikilodermie r'eticul'ee pigmentaire du visage et du cou*. This disease of the face and neck is now named after him as poikiloderma of Civatte.<sup>21</sup> In 1927 in a paper entitled *Lichen nitidus et lichen planus* he described the importance of colloid body in the histopathological diagnosis of lichen planus. A very clear description of this structure was described by Civatte in his *Atlas de histopathologie Cutanée as corps hyalins*.<sup>22,23</sup> Though Civatte with his painstaking work established the role of corps hyalins, he never used the term Civatte bodies. As described by Burgdorf *et al.*, the term Civatte body was not used even by his son Jean Civatte, another eminent dermatologist of the French school until the second edition of his treatise *Histopathologie cutanée*.<sup>24</sup> So, it is yet to be unearthed how this term, that was earlier described by Darier in 1909 and subsequently Sabouraud in 1910 became a common usage in the dermatopathology.

### Epilogue

Although Max Joseph elaborated about this sub-epidermal histopathological feature of lichen planus, this phenomenon was first reported in the published literature by Caspary and subsequently by Robinson. They had a difference of opinion regarding the nature of the vesicle (artificial or pathological). It is true that Caspary should be credited for his pioneering observation, but one cannot refute the contributions of Robinson and Max Joseph. Similarly, colloid bodies were clearly established by Civatte, but the early observations and identification of Darier and Sabouraud are landmark steps in the world of dermatopathology. Although Max Joseph space and Civatte bodies do not bear the names of the early observers, these never undermine the contribution and stature of the titans such as Caspary, Robinson, Darier, or Sabouraud. Sometimes some authorities have suggested renaming the eponyms and some others are of a divergent view.<sup>24-26</sup>

However, this confusion and controversy is not an uncommon affair and the widespread usage of eponyms in the medical lexicon is very much a reality. In an article on medical eponyms the authors have commented: "Many of the names were fortuitously connected decades later as they were rediscovered by others. Although the medical disease eponym is an archaic concept and may lead to scientific confusion, we believe that eponyms are here for the foreseeable future."<sup>27</sup>

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### Conflicts of interest

There are no conflicts of interest.

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