

Analyzing and mapping the intellectual structure of published articles in the field of epidermolysis bullosa disease using the co-word approach

Abstract

Background and Objective: One of the most commonly used methods for analyzing knowledge structure in different contexts and drawing concept maps is co-word analysis. The basis of the co-word analysis is the idea that co-word can describe the concept of documents. By analyzing the correlation of the keywords of the articles in a field, one can get a picture of the actual content of the topics in that field and identify the main, underperforming and emerging topics. The present study, following co-word analysis method, Examines the status of topics in the field of Epidermolysis bullosa in order to gain knowledge and understanding of co-word status, understand the researcher's attitudes, and investigate the evolution of their scientific relationship, necessary context for conscious interaction, and Provide the researchers with a breakthrough. Evaluating different aspects of Epidermolysis bullosa research can be effective in directing future research and planning for balanced research development and optimal allocation of funding and facilities and ultimately the quantitative and qualitative promotion of scientific output in the field of Epidermolysis bullosa. Researchers can use the findings of this research to play an effective and useful role in future policy-making in this field and to prevent excesses in conducting research in this field.

Material and Method: The method of the present study is co-word analysis and social network analysis which is one of the analytical methods in scientometrics. The statistical population of the present study is all English-language documents related to the field of Epidermolysis bullosa -

with the exception of letter, note, editorial, and short survey – that were indexed in the Embase database from 1966 to 2018. In the present study, a multi-step and hybrid search strategy was used to collect the data. Records retrieved in Plain Text, tab-delimited, and RIS formats were saved as complete records and finally when the data storage was completed, the associated files were integrated and saved as a file for later consideration. Keywords were extracted from the documents and after standardization and homogenization, a 113 * 113 square matrix was created consisting of repeated keywords. Using SPSS, the hierarchical clustering was performed, followed by the Ravar Matrix software for each of the clusters, and using the UcinET mapping Multidimensional scale was prepared.

Results : Frequency distribution of the keywords of the articles shows that the keywords : blister, gene mutation, skin biopsy with frequency of 695, 685, 577 and according to the co-word, the keywords "Blister --- skin biopsy", "Blister --- gene" mutation "and" gene mutation --- phenotype "rank first, second and third, respectively. Under Bradford's law, there are 113 keyword core, 548 topics close to the core and 7995 topics far from the core. Cluster of differential diagnosis of Epidermolysis bullosa, clinical signs and pathologic findings of Epidermolysis bullosa, cytogenetic and molecular pattern of the three clusters obtained in this study. Examination of the centrality and density of each of these clusters in the strategic diagram showed that the cytogenetic and molecular theme of butterfly, in addition to being expandable, had the most centrality among the others. The highest incidence index was related to genetic cluster and treatment from fourth period and genetic cluster from third period to 50% similarity. According to the Cluster 3 strategy graph, which contains the most frequent keywords, has the

most centrality, in terms of influence, in comparison to other topics, and in terms of linkage among other keywords.

Conclusion : The frequency distribution of the vocabulary and their cohesion indicates that most of the topics of interest of the authors in this field includes attention to the causes of Epidermolysis bullosa , focusing on diagnostic methods of this disease and diagnostic methods. Differentiating and focusing on the genetic expression of the disease is especially genetic. Researchers in this field, first looked for ways to make a differential diagnosis of the disease and then sought some clinical signs and eventually sought treatment for the disease, with few studies investigating the complications of the disease. Moreover, Analysis of the data indicates that changes in the literature published in the field of Epidermolysis bullosa have been relatively high over the years and the evolution of the issues raised in these papers is zero, and also zero similarity between subjects in successive periods. This suggests that over time, researchers have diversified their research into new areas of research. Analyzes show that clinical signs, pathological, cytogenetic and molecular findings of Epidermolysis bullosa in this area have received little attention, and among the various subject areas of Epidermolysis bullosa, the subject of most studies in the field of Epidermolysis bullosa is "differential diagnosis". Epidermolysis bullosa." Epidermolysis bullosa researchers are trying to discover new ways to diagnose and eventually treat the disease in the present century.

Keywords: Mapping Intellectual Structure, Co-word Analysis, epidermolysis bullosa, Clustering analysis, Strategic diagram, Multidimensional Scale Method