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A Bibliometric Analysis of the Top 100 Most-Cited Papers On Slipped Capital Femoral Epiphyses (SCFE)

Introduction:
Slipped capital femoral epiphysis (SCFE) is a common adolescent hip disorder characterized by the displacement of the femoral head due to an unstable growth plate. As SCFE remains one of the leading hip disorders in this age group, understanding its risk factors, pathology, and treatment is crucial for effective patient care. We conducted a bibliometric analysis of the top 100 most-cited articles (T100) in the field to highlight the most influential research on SCFE.
Methods:
Using the Web of Science Core Collection, we searched for articles published between 1970 to 2024 using the search terms “Slipped capital femoral epiphysis OR Slipped upper femoral epiphysis OR coxa vara adolescentium”. From the results of our search, we identified those articles relevant to SCFE and selected the T100 most cited articles. A bibliometric analysis was performed using data from the articles regarding authorship, publication year, citation number, journal, country and institution, and study type. Bibliometric analysis and visualization was performed using the Bibliometrix R package and VOSviewer.
Results:
Our search yielded 1568 results. T100 articles were published between 1970- 2015 in 14 countries, by 119 institutions, and in 13 journals. The USA was the most productive country and Journal of Pediatric Orthopedics published the most articles [Figure 1]. The mean number of citations per article was 93.37. The most common study category was observational. Some of the most common topics in our keyword co-occurrence visualization included SCFE, avascular necrosis, and femoroacetabular impingement [Figure 2].
Conclusion:
Bibliometric analyses can aid academic providers by encapsulating a wide body of research surrounding a diagnosis and reporting it succinctly. In performing this research, we hope that our findings can be a useful starting point for any researcher looking to widen the body of knowledge we currently have on SCFE.