

ABSTRACT

Br J Neurosurg. 2022 Feb 10;1-6. doi: 10.1080/02688697.2022.2034745. Online ahead of print.

Bibliometric analysis of the top 100 cited articles on stereotactic radiosurgery of intracranial meningiomas.

Patel A(1), Abdelsalam A(2), Shariff RK(3), Mallela AN(3), Andrews EG(3), Tonetti DA(3), Lunsford LD(3), Abou-Al-Shaar H(3).

Author information:

(1)Department of Neurosurgery, New York University School of Medicine, New York, NY, USA.

(2)Department of Neurology, Saint Louis University Hospital, St. Louis, MO, USA.

(3)Department of Neurological Surgery, University of Pittsburgh Medical Center, Pittsburgh, PA, USA.

BACKGROUND: Stereotactic radiosurgery is becoming an integral modality in the management of intracranial meningiomas, both as the primary treatment or as adjuvant therapy. This study analyzes the scholarly impact of the top 100 cited articles on the stereotactic radiosurgical management of intracranial meningiomas.

METHODS: A ranked list of the 100 most-cited articles was generated using the Scopus database by searching the keywords 'intracranial meningioma' and 'stereotactic radiosurgery'. All articles were then evaluated on multiple criteria regarding both the publication of the articles (year of publication, journal, country of origin, and authors) as well as their methods and foci (type of study, location of studied meningiomas, and type of radiosurgical modality). Quantitative and qualitative analyses were then performed from the collected data.

RESULTS: The most frequently cited articles on stereotactic radiosurgical management of intracranial meningiomas were published between 1990 and 2016. The average citation-per-year across all papers in the list was 6.1. The most studied anatomic area of intracranial meningiomas was the skull base, with the cavernous sinus being the most well-studied specific site. The most utilized stereotactic radiosurgical modality was Gamma Knife radiosurgery. The country with the highest number of publications was the United States. Twenty-six percent of the articles were published in the journal Neurosurgery; Lunsford, Kondziolka, Flickinger, Sheehan, and Pollock were respectively the most frequent listed authors among this list. The most active academic institute publishing on this topic was the University of Pittsburgh Medical Center.

CONCLUSION: Stereotactic radiosurgery is an integral modality in the management of intracranial meningiomas. This bibliometric analysis sheds the light on the ways in which intracranial meningiomas have been studied in the past two decades in order to identify trends among neurosurgeons and radiation oncologists and to reveal areas of rising and declining focus.

DOI: 10.1080/02688697.2022.2034745

PMID: 35142245