The objective of the study was to explore the use of ChatGPT (Chat-Generative Pre-Trained Transformer) in neurosurgery and its potential impact on the field. The authors aim to discuss, through a systematic review of current literature, how this rising new artificial intelligence (AI) technology may prove to be a useful tool in the future, weighing its potential benefits and limitations. The authors conducted a comprehensive and systematic literature review of the use of ChatGPT and its applications in healthcare and different neurosurgery topics. Through a systematic review of the literature, with a search strategy using databases such as PubMed, Google Scholar, and Embase, they analyzed the advantages and limitations of using ChatGPT in neurosurgery and evaluated its potential impact. ChatGPT has demonstrated promising results in various applications, such as natural language processing, language translation, and text summarization. In neurosurgery, ChatGPT can assist in different areas such as neurosurgical planning, image recognition, medical diagnosis, patient care, and scientific production. A total of 128 articles were retrieved from databases, where the final 22 articles were included for thorough analysis. The studies reviewed demonstrate the potential of AI and deep learning (DL), through language models such as ChatGPT, to improve the accuracy and efficiency of neurosurgical procedures, as well as diagnosis, treatment, and patient outcomes across various medical specialties, including neurosurgery. There are, however, limitations to its use, including the need for large datasets and the potential for errors in the output, which most authors concur will need human verification for the final application. The search demonstrated the potential that ChatGPT holds for the present and future, by the studies' authors' findings herein analyzed and expert opinions. Further research and development are required to fully understand its capabilities and limitations. AI technology can serve as a useful tool to augment human intelligence; however, it is essential to use it in a responsible and ethical manner [1)].

1)

Roman A, Al-Sharif L, Al Gharyani M. The Expanding Role of ChatGPT (Chat-Generative Pre-Trained Transformer) in Neurosurgery: A Systematic Review of Literature and Conceptual Framework. Cureus. 2023 Aug 15;15(8):e43502. doi: 10.7759/cureus.43502. PMID: 37719492; PMCID: PMC10500385.