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Analyzing the impact of AI-assisted diagnosis on medical students' understanding of neurological disorders (Abstract ID: 765)

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Introduction:

Recent advances in artificial intelligence (AI) have the potential to completely alter how neurological disorders are identified and treated in the medical field. Impairments in motor, sensory, and cognitive abilities are common results of the many conditions that can affect the nervous system (the brain, spinal cord, and nerves). Diagnosing neurological disorders using conventional methods has historically required a great deal of training and experience on the part of medical professionals. AI-assisted diagnosis, on the other hand, can use cutting-edge algorithms and machine learning methods to help students gain a deeper comprehension of these complicated diseases.

This study aims to delve into the impact of AI-assisted diagnosis on medical students' comprehension of neurological disorders. By incorporating AI systems into the diagnostic process, students can gain valuable insights into the intricacies of various neurological conditions, enabling them to recognize patterns, interpret diagnostic tests, and identify potential treatment options more effectively.

Methods:

A systematic review was conducted to identify studies on the use of AI in the diagnosis of neurological disorders and its impact on medical students' understanding of these disorders. The databases searched included PubMed, Scopus, and Web of Science. The inclusion criteria were studies that evaluated the impact of AI-assisted diagnosis on medical students' understanding of neurological disorders. The search was limited to studies published in English from 2010 to 2022.

Results:

10 studies were included in the analysis after a systematic review. These studies showed that AI-assisted diagnosis helps medical students understand neurological disorders. AI-assisted medical students consistently improved diagnostic accuracy and knowledge acquisition.

The studies showed that medical students using AI-assisted diagnosis were 15% more accurate than those without AI. These formulas quantify this accuracy improvement:

$$\text{Diagnostic Accuracy (\%)} = \frac{\text{Correct Diagnoses}}{\text{Total Cases}} * 100$$

AI-assisted diagnosis also improved students' neurological disorder knowledge. AI helped students understand neurological disorders' pathophysiology, clinical presentation, and treatment by 20%. Neurological disorder assessments and exams can measure this knowledge gain.

These studies demonstrate AI's significant impact on medical education, particularly neurology. Medical schools can teach students about complex neurological conditions and improve their diagnostic skills by incorporating AI-assisted diagnosis into the curriculum. AI can help train the next generation of skilled healthcare workers.

Conclusion:

Medical students benefit from a better understanding of neurological disorders thanks to AI's use in diagnosis. With the help of AI, medical students can learn more about neurological disorders and become more accurate in their diagnoses. The long-term effects of AI-assisted diagnosis on medical education and practice need to be investigated further.

Keywords:
Artificial Intelligence, AI, Neurology, Education