Artificial Intelligence in Emergency Care

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ABSTRACT

Introduction: Artificial intelligence (AI) is developing rapidly and has gradually entered all aspects of daily life, especially medicine. Emergency departments and related services, such as intensive care units and emergency medical dispatch, have recently become the focus of AI. Considering the increasing progress of AI, the purpose of this article is to investigate its applications in the field of special care.

Search Strategy: This study was conducted in 2024 by searching the PubMed database. To access the articles, the terms "Artificial intelligence" and "intensive care" were used by considering the communication terms AND, OR, and NOT; the inclusion criteria for the articles published from 2019 to 2024 were original article, English language, free access, and study on humanities. Of 36 articles found in the first review, after checking the titles of the articles in the initial screening stage, 19 articles were included in the study. Finally, five articles were removed due to the lack of access to the full text, being a review and not applicable.

Results: After reviewing the articles, at least 14 related articles were included in this study. The findings indicate that the studies almost conducted in the fields of management (in decision support and early warning system), prediction (mortality in the intensive care unit, blood transfusion in patients with gastrointestinal bleeding, early prediction of the need for mechanical ventilation in the neonatal intensive care unit), rehabilitation (providing a mechanical ventilator), diagnosis (identification and early diagnosis of sepsis in the neonatal intensive care unit and diagnosis of heart diseases) and classification the risk of heart disease mortality, all indicate the use of AI in the field of emergency care.

Conclusion and Discussion: Currently, arrangements and endeavors have primarily centered on moving forward with persistent workflow in the crisis department. Solutions given by AI can be a valuable component of system improvement for pharmaceutical and crisis administrations. Healthcare specialists can use AI to supply better measures in emergency care.