

ARTIFICIAL INTELLIGENCE IN TRADITIONAL MEDICINE

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Relevance. Artificial intelligence (AI) is gradually becoming an auxiliary tool in medicine, rather than a substitute for clinical solutions. Today, hospitals use AI mainly to solve tasks that require speed, identify patterns, and process large amounts of data [1]. Ayurveda, although based on ancient knowledge, is also reaching a new level, especially in areas where large amounts of data, such as the pharmacology of medicinal plants and patient characteristics, need structured analysis [2].

This emerging evidence base provides raw data that artificial intelligence can analyze more efficiently than manual methods.

Artificial intelligence helps researchers interpret classical concepts using measurable parameters. This allows us to study Ayurveda with the same analytical precision as in the development of modern medicines [3].

Target. To study students' attitudes towards artificial intelligence in medical and educational practice, as well as the possibilities of using AI in Ayurveda.

Research methods. Scientific articles on the use of artificial intelligence in Ayurveda were analyzed and a survey of 94 students was conducted to assess the experience of using and attitudes towards the use of AI.

Results and their discussion. According to the survey, all students actively use AI in preparation for classes and exams, more than 79.8% believe that the introduction of AI in the diagnosis of diseases will improve the quality of medical care. About 53.2% agree that AI can help in designing individual treatment programs, and about 37.2% are ready to teach patients how to use AI for self-help. However, the use of technology in Ayurveda has not found support. Only 12.8% believe that the modern development of traditional medicine using AI can expand the possibilities of Ayurvedic practice. Students do not support the introduction of AI and are not ready to use AI-based Ayurveda platforms to support their health.

Conclusions. Modern medicine benefits from the precision and scalability of artificial intelligence, while Ayurveda gets a tool to validate its centuries-old clinical knowledge through measurable, numerical, and scientific assessments. Combining these areas promises a more predictive, preventive, and personalized approach to healthcare. Considering that future doctors do not support the use of AI in Ayurveda, it is necessary to raise their awareness and involve them in scientific research in this field.

LITERATURE

1. Revolutionizing healthcare: the role of artificial intelligence in clinical practice / S. A. Alowais, S. S. Alghamdi, N. Alsuhbany [et al.] // BMC Medical Education. – 2023. – Vol. 23, № 1. – Art. 689.

2. Artificial intelligence in traditional medicine: evidence, barriers, and a research roadmap for personalized care / K. Jongjiamdee, P. Pornwonglert, N. Na Bangchang P. Akarasereenont // Frontiers in Artificial Intelligence. – 2025. – Vol. 8. – Art. 1659338.

3. The integration of artificial intelligence into clinical medicine: Trends, challenges, and future directions / P. S. Aravazhi, P. Gunasekaran, N. Z. Y. Benjamin [et al.] // Disease-a-Month. – 2025. – Vol. 71, № 6. – Art. 101882.

BACTERIAL PROFILE AND ANTIBIOTIC RESISTANCE PATTERN IN DIABETIC FOOT INFECTION: A CROSS SECTIONAL STUDY

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Relevance. Diabetic Foot Infections (DFI) cause global amputations. Rising Multi Drug Resistance (MDR) strains hinder therapy and outcomes [1]. Local surveillance is vital to guide treatment and resistance [2].

Target. To evaluate the antibiotic sensitivity and resistance patterns of isolated microorganisms in a patient group and identify the bacterial profile of DFIs.

Research methods. In this cross-sectional study of DFI patients, wound cultures were analyzed using data from clinical files and lab reports. Gram-positive (Gr+) and Gram-negative (Gr-) isolates were categorized. Susceptibility was coded Sensitive(S), Resistant (R), or Intermediate (I treated as R). Descriptive statistics (frequencies/percentages) were used to calculate sensitivity and resistance rates for all isolates tested antibiotics.

Results and their discussion. Gr- bacteria predominated, while both Gr+ and Gr- species were found. The polymicrobial character of DFIs was demonstrated by the most common isolates, which included Staphylococcus aureus, Pseudomonas aeruginosa, Klebsiella spp., Acinetobacter spp., and Escherichia coli. Staphylococcus aureus was the primary pathogen among Gr+ bacteria. High sensitivity was demonstrated by vancomycin and linezolid, although resistance to beta-lactams such as ampicillin was more prevalent.

Pseudomonas aeruginosa and Klebsiella species showed varying levels of resistance among Gr-organisms. Cephalosporins and fluoroquinolones were less sensitive than carbapenems, especially Meropenem. There was an increase in resistance to certain cephalosporins and ciprofloxacin. MDR strains were present in several isolates that showed resistance to several antibiotic classes.

Gr- organisms predominate, which is in line with research from tertiary care facilities, where resistance colonization is encouraged by recurring antibiotic exposure