EDITORIAL

'The Way Forward' Healthcare in Accordance to Artificial Intelligence

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Artificial Intelligence has previously made considerable advances in renovating the healthcare sector. One of the most notable applications is the role of artificial intelligence in diagnostics. AI processes, particularly those powered by deep learning, are now capable of analyzing medical images, detecting patterns, and identifying early stages of diseases with greater accuracy than many human clinicians [1].

Forensic medicine, an area heavily reliant on the intersection of law and medicine, can also benefit from artificial intelligence. AI-powered tools are increasingly used in the identification of causes of death, analyzing autopsy reports, and even recognizing delicate forensic evidence in cases of suspected abuse, or poisoning, DNA evidence, pattern recognition, face recognition, crime scene reconstruction, digital forensics, image-processing, forensic ballistic, and gunshot identification tracking bullet pathway. By analyzing large amounts of data, AI can assist forensic pathologists in making more informed, faster decisions [2].

Medico-legal cases often involve complex connections of healthcare, law, and ethics. Whether in misconduct claims, negligence, determining liability in cases of medical negligence, postmortem interval estimation, or the estimation of different causes of death. AI has the potential to significantly streamline legal proceedings, improve the accuracy of judgments, and support forensic experts' decision-making. In legal research, AI can analyze vast amounts of legal documents, past case histories, and medical records to provide lawyers with relevant information faster than human assistants [3].

Despite its potential, integrating AI into the medico-legal and healthcare systems raises several ethical and legal concerns. One major issue is data privacy. The immense amounts of personal & medical data that AI systems require are highly sensitive, and illegal access or breaches can have tragic consequences for patients [4]. Superfluous challenge is accountability. When an AI system makes an error, whether it be a misdiagnosis, a mistake in medical cases, or an incorrect legal valuation, who is to be held responsible? The developers of the AI? The healthcare provider or legal professional who used the AI tool? These questions are not yet fully spoken, and new legal frameworks may be needed to determine liability and accountability in these situations [3, 4]. The application of AI and machine learning techniques in forensic toxicology includes predictive toxicology, expansion of AI-driven spectral libraries, computerization of analytical workflows, and integration of multi-omics data for comprehensive toxicological profiling [5]. It has already begun to restructure healthcare and the medico-legal system; its full potential has yet to be realized.

Moving forward, integrating AI into these arenas will require a collaborative effort among medical technologists, healthcare providers, legal authorities, and policymakers. Finally, as we move towards a more technology-driven era, the balance between human findings and machine efficiency will be vital to achieving the best outcomes for all. It is an immense challenge for medico-legal and forensic experts to make use of artificial intelligence; it should be perceived as a complementary instrument that enhances rather than replaces human judgment. A carefully regulated and ethically guided adoption of AI can pave the way toward a more efficient, equitable, and transparent medico-legal and healthcare system.

GENERATIVE AI AND AI-ASSISTED TECHNOLOGIES IN THE WRITING PROCESS

During the preparation of this work the author(s) limitedly used ChatGPT (GPT-4, OpenAI) to get language suggestions and do minor proofreading in some parts of the manuscript. After using this tool/ service, the author(s) reviewed and edited the content as needed and take(s) full responsibility for the content of the published article.

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