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CLINICAL AND LABORATORY CRITERIA FOR HUMAN SEPSIS

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Relevance. Sepsis, a life-threatening, critical medical condition triggered by immune system abnormal response to infection, with potentially fatal consequences if not promptly addressed. The urgency of sepsis lies in high prevalence, significant mortality rate. Still there no fixed and accepted by all criteria for sepsis insensitivity. The clinical course of sepsis is marked by distinct characteristics that reflect the dynamic interaction between the invading pathogen and the host immune response.

Aim: establishing precise clinical and laboratory criteria is a fundamental aspect of combating sepsis efficiently. The primary aim is to analyze and assess the clinical and laboratory criteria employed in the diagnosis and management of human sepsis.

Materials and methods. Based on the analysis of current research, clinical criteria and laboratory biomarkers for the pathological process were identified. PubMed reports, articles, and reviews were analyzed. In the conducted comprehensive literature review on sepsis diagnosis and management, various aspects of clinical and laboratory criteria were analysed to enhance the understanding and impact of sepsis treatment. The data collection process involved gathering information on a wide range of parameters, including clinical indicators, laboratory tests, and organ dysfunction parameters, aiming to build a robust foundation for evaluating sepsis criteria.

Results and their discussion. The comprehensive analysis and synthesis of findings from the literature review and data analysis have significantly contributed to the understanding of clinical and laboratory criteria for sepsis. The evaluation of current criteria revealed both their strengths and limitations, particularly emphasizing their sensitivity and specificity in accurately diagnosing sepsis. By delving into the implications of organ dysfunction, cytokine levels, and coagulation abnormalities, the review addressed controversies and proposed areas for further research, providing a robust foundation for continued advancements in sepsis diagnosis and management. The findings presented from the literature review and data analysis focused on the effectiveness of various clinical and laboratory criteria in diagnosing sepsis. This comprehensive examination sought to identify common trends, discrepancies, and areas for improvement within the existing criteria landscape, aiming to enhance the accuracy and timeliness of sepsis diagnosis. Moreover, the exploration of strengths and limitations provided valuable insights into the current criteria's capabilities, shedding light on their sensitivity, specificity, and predictive value. This critical analysis of the existing criteria landscape anchored the review in the practical implications of these criteria in real-world clinical settings, fostering a deeper understanding of their practical utility. Furthermore, the implications of organ dysfunction, cytokine modulation, and coagulation irregularities on sepsis diagnosis and prognosis underscored the multifaceted nature of sepsis pathophysiology. This forward-looking approach aimed to bridge gaps in current understanding and foster the development of more robust and comprehensive diagnostic criteria for sepsis. The synthesis of these findings not only advances the current understanding of sepsis diagnosis and management but also lays the groundwork for future research and development efforts aimed at refining the criteria landscape for improved patient outcomes.

Conclusion. In conclusion, this thesis underscores the pivotal role of clinical and laboratory criteria in early sepsis detection and management. Emphasis is placed on the necessity of integrating various clinical, pathophysiological, immunological, cytokine, and hemostasis parameters for a holistic approach to sepsis care. Recommendations for healthcare providers and policymakers are provided based on the thesis insights, urging a collaborative effort towards enhancing sepsis diagnostic and therapeutic strategies. Additionally, suggestions for future research directions are highlighted to deepen our comprehension of sepsis pathophysiology and enhance patient care outcomes.