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PROGNOSTIC MARKERS FOR THE PRECISION DIAGNOSIS OF COMPLICATED ACUTE DIVERTICULITIS: SYSTEMATIC REVIEW

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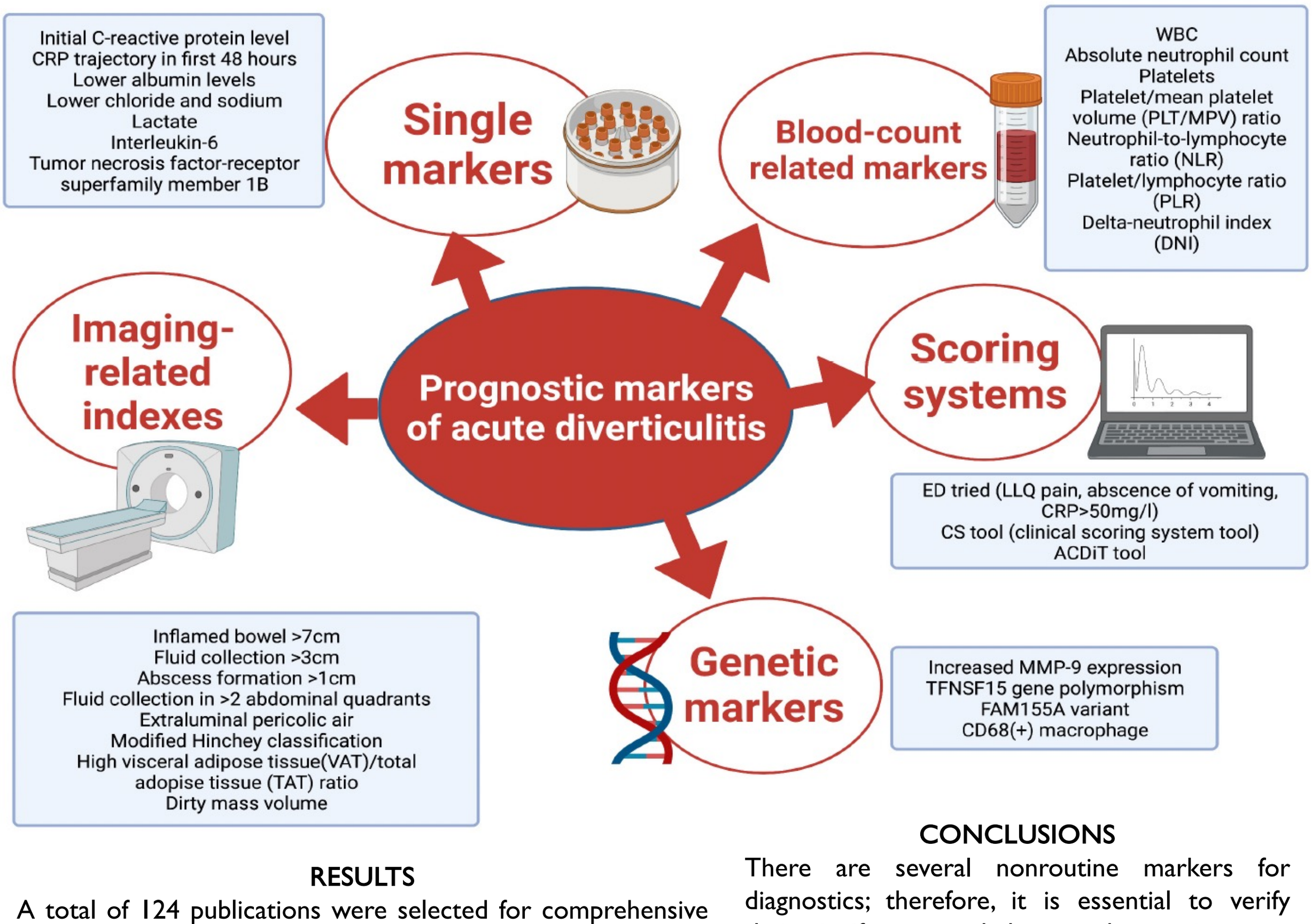
BACKGROUND

Complicated acute diverticulitis is associated with the formation of an abscess, a fistula, bowel obstruction, or a perforation. It is characterised by a critical condition, several complications, and high mortality. Complicated diverticulitis is more common in elderly patients. Appropriate selection of diagnostic markers and precise distinction between simple and complicated diverticulitis are essential to determine the best treatment strategy.

METHODS

A systematic search in PUBMED, MEDLINE on colonic diverticulitis was performed. Diagnostic tools, randomised controlled trials, nonrandomised comparative studies, observational epidemiological studies, national and international guidelines, reviews of observational studies on the emergency surgical treatment of complicated diverticulitis, and studies of prognostic significance were reviewed. The criteria for eligibility for the studies were diagnosis and classification, emergency surgery, and predictive factors. The search was limited to articles published in the last decade. The last database search was performed on 31 December 2023.



RESULTS

A total of 124 publications were selected for comprehensive review. Our study visually summarises prognostic markers related to the diagnosis of complicated diverticulitis. We divided them into four groups: single markers, blood count-related markers, imaging-related indexes, and scoring systems.

DISCUSSION

The heterogeneity of patients with acute diverticulitis means that treatment should be tailored on an individual basis. Research on relevant markers for diagnosing complicated diverticulitis is gradually increasing.

CONCLUSIONS

There are several nonroutine markers for diagnostics; therefore, it is essential to verify their significance, and they can be routine tests for complicated diverticulitis. Research on some biomarkers is still in progress, with a focus on defining reference values, diagnostic accuracy, and clinical applications. Based on the overall consideration, we recommend combining biomarkers and scoring systems. Although the retrospective setting does not allow definitive recommendations, these results are of utmost importance for the design of future prospective, randomised controlled trials.

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