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Commentary

# Commentary to: Anti–miR-93-5p therapy prolongs sepsis survival by restoring the peripheral immune response

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The major message of this manuscript is that miR-93-5p is a potential therapeutic target in sepsis through the regulation of both innate and adaptive immunity, with possibly a greater benefit for elderly patients than for young patients. Septic shock is the condition with the highest mortality, with reports varying from 25 to 50% depending on etiology, duration of sepsis and of follow-up, and country of origin. The higher rate of sepsis is in elderly patients, immunodeficient patients, and those who present comorbidities. Therefore, stratification in clinical trials should be implemented to ascertain the validity of the results or whether there are subpopulations that respond better to specific interventions. At present the Food and Drug Administration has no approved mechanistic drug for this lethal condition.

The timing of intervention is crucial, there are a number of clinical and laboratories studies that may alert the clinicians to the degree of risk for sepsis. The sepsis screening tool enables the rapid identification of high risk patients. A widely used tool, the Quick Sequential Organ Failure Assessment (qSOFA) is commonly used. Kim et al. proposed the S-S.M.A.R.T. as a prognostic tool, concluding that is a useful tool for suspected sepsis [1].

As for mechanistic studies microRNAs, small non-codingRNAs, are well known players in sepsis processes. ncRNAs also participate in regulation of the immune system and a variety of other vital functions. With the advent of novel ncRNAs nanoparticle carriers such as Dioleylphosphatidyl choline nanoparticles (DOPC-NP) demonstrate the feasibility of conducting clinical trials is available. These novel delivery systems are non-toxic and easy to manufacture. Several clinicals trials are ongoing at present. The data reported also supports a role for miR-93 treatment either alone or in combination with checkpoint inhibitors.

## References

1. Kim YJ, Kim JW, Lee KR, Hong DY, Park SO, Lee YH, et al. The S-S.M.A.R.T: A New Prognostic Tool for Patients with Suspected Sepsis in the Emergency Department. Emerg Med Int. 2023 Aug 10;2023:8852135.