STROBE Statement—Exploring Plasma Metabolomic Changes of Sepsis: A Clinical Matching Study Based on Gas Chromatography Mass Spectrometry

Section/item	Item No	Recommendation	Reported on Page Number/Line Number	Reported on Section/ Paragraph
Title and abstract	1a	Identification as a clinical matching study in the title.	Page1/Line1-2	Title/Paragraph1
	1b	Structured summary of trial design, objective, methods, results, and conclusions; for specific guidance see CONSORT for Abstracts.	Page1/Line11-30 Page2/Line1-4	Abstract/Paragraph1-4
Introduction				
Background/ rationale	2	Scientific background and explanation of sepsis and related biomarkers	Page3/Line2-24	Introduction/Paragraph1-2
Objectives	3	Specific objectives or hypotheses(metabolomics of sepsis)	Page3/Line25-34	Introduction/Paragraph3
Methods				
Study design	4	Description of study design including approval from institution and volunteers.	Page4/Line3-16	Methods/Paragraph1
Setting	5	Settings, locations, periods, and control group of recruitment of the data were collected.	Page4/Line3-16	Methods/Paragraph1
Study size	6	How sample size was determined	Page4/Line7-10	Methods/Paragraph1
Participants	7a	Matching criteria for participants	Page4/Line7-10	Methods/Paragraph1
	7b	Sample preparation and labeling	Page4/Line13-24	Methods/Paragraph2
Variables	8	Flow chart of our study	Figure 1	Figure 1
Data sources/ measurement	9	Gas chromatography-mass spectrometry analysis.	Page4/Line26-Page5/Line2	Methods/Paragraph3
Quantitative Variables	10	Eligibility criteria for each subgroup.	Page5/Line3-31	Methods/Paragraph4-7
Statistical methods	11a	Statistical methods used to deconvolve the GC-MS spectra	Page5/Line33- Page6/Line4	Methods/Paragraph8
	11b	Bias, data normalization.	Page6/Line4-6	Methods/Paragraph8

	11c	Statistical methods used to compare groups for primary and subgroup analyses	Page6/Line6-22	Methods/Paragraph8
Results				
Participants	12	For each group, the numbers of participants who provided by ICU and the Healthy Examination Center, and were analyzed for the primary outcome.	Page6/Line28-30 Table 1	Results/Paragraph1 Table 1
Implementation of intervention	13	To verify the model of results.	Page6/Line26-30 Figure 2	Results/Paragraph1 Figure 2
Descriptive and outcome data	14a	For each group, the characteristics and comparative analysis of metabolites of sample.	Page7/Line3-26 Figure 2	Results/Paragraph2 Figure 2
	14b	For each group, the characteristics and comparative analysis of metabolic pathways of sample.	Page7/Line28-Page8/Line14 Figure 3	Results/Paragraph3 Figure 3
Other analyses	15	Subgroup analysis (AKI, ARDS, SIMD, AHI)	Page8/Line15-Page9/Line31 Table 2-5 Figure 4-7	Results/Paragraph4-7 Table 2-5 Figure 4-7
Discussion				
Interpretation	16a	A cautious overall interpretation of results.	Page9/Line33-Page12/Line5	Discussion/Paragraph1-4
	16b	A cautious overall interpretation of results about subgroup (AKI, ARDS, SIMD, AHI)	Page12/Line6-Page13/Line30	Discussion/Paragraph5-10
Limitations	17	Discuss limitations of the study both direction and magnitude of any potential bias	Page13/Line31-Page14/Line11	Discussion/Paragraph10
Generalisability	18	GC-MS analysis may as a detection tool for plasma metabolomics analysis of sepsis and related organ dysfunction.	Page14/Line11-14	Discussion/Paragraph10
Key results	19	Summarise key results to study objectives	Page14/Line16-24	Conclusions/Paragraph1
Other information				

Funding	20	Sources of funding and other support (e.g., supply of drugs); role of funders.	Page15/Line6-17	Funding/Paragraph1

Note: This is an explanation and elaboration checklist discussing each checklist item, reported on page number/line number and reported on section/paragraph in main text. We strongly recommend reading it in conjunction with main text.

Article Information: http://dx.doi.org/10.21037/atm-20-3562

*As the checklist was provided upon initial submission, the page number/line number reported may be changed due to copyediting and may not be referable in the published version. In this case, the section/paragraph may be used as an alternative reference.