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Letter to the Editor

The Management of Syncope in the Emergency Department should Depend not on Gender, but on the History, Clinical Exam, and Results of Instrumental Investigations

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Letter to the Editor

We read with interest the article by Ayar *et al.* on a multicenter study on the influence of sex on the treatment of transient loss of consciousness (TLOC) in European emergency departments ^[1]. The study found that sex influences the treatment of transient loss of consciousness in emergency departments, that women at high risk for transient loss of consciousness are admitted less frequently than men, and that guideline-based treatment methods are applied less often to women than to men ^[1]. The study is informative but requires further discussion.

First, several risk factors for TLOC were not considered in the analysis ^[1]. In addition to cardiac risk factors, genetic predisposition, lifestyle, diet, the full spectrum of comorbidities, and all concomitant medications were not included. In particular, neurological, psychiatric, pulmonary, endocrine, infectious, and metabolic risk factors for TLOC are missing. Neurological risk factors that should be considered include stroke, intracerebral hemorrhage, subarachnoid hemorrhage, traumatic brain injury, brain tumor, previous neurosurgical intervention, and epilepsy. Pulmonary risk factors include pulmonary embolism, COPD, malignancies, previous lung surgery, pneumothorax, and pneumonia. Endocrine risk factors include Addison's disease, hypothyroidism, hyponatremia, hypoaldosteronism, and hypopituitarism. As long as these interfering factors are not included in the analysis, the results obtained and their interpretation are unreliable.

Second, the Canadian Syncope Risk Score (CSRS) is inadequate for assessing the risk of syncope ^[1]. Among the limitations of the CSRS are that it only assesses cardiovascular risk, the risk assessment is partly based on subjective reports, family history is not considered, and only blood pressure, QRS axis, QT interval, and troponin levels are included in the score ^[2]. Since the risk of TLOC depends on numerous other factors, the score cannot be reliably recommended or used to assess this risk.

Third, autonomic dysfunction was not considered in the analysis. Because loss of consciousness can be caused by reflex dysautonomia due to parasympathetic hypertonicity or sympathetic hypotonicity, these must be ruled out as potential causes ^[3]. The fourth point is that the results may also depend on whether the studies were conducted by women or men at the participating centers. Gender can skew the results if only objective measures are considered.

Overall, the diagnostic and therapeutic management of TLOC in the emergency department should not depend on gender, but rather on the patient's history (risk factor profile, genetic predisposition), clinical examination, and the results of instrumental investigations. The risk assessment of TLOC should not be based on a score that only captures cardiovascular risk, but should also include neurological, pulmonary, endocrine, and metabolic risks. Studies should not be conducted to definitively prove gender differences, but rather to optimize treatment for all patients. The hypothesis of supposedly inferior treatment for women with TLOC in emergency departments is untenable as long as study design and methods do not allow for reliable answers.

Declarations**Ethical Approval:** Not applicable.**Consent to Participation:** Not applicable.**Consent for Publication:** Not applicable.**Funding:** None received.**Availability of Data and Material:** All data are available from the corresponding author.**Completing Interests:** The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.**Author Contribution:** JF was responsible for the design and conception, discussed available data with coauthors, wrote the first draft, and gave final approval. SM: contributed to literature search, discussion, correction, and final approval.**Acknowledgements:** None.**Keywords:** Transient Loss of Consciousness, Syncope, Cardiac Disease, Gender Specificity, Risk Profile**References**

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