INPLASY PROTOCOL

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None declared.

Lance-Adams syndrome; what we know now

Malakooti, M[1]; Neshat, S[2]; Shayestehyekta, H[3]; Gorgani, M[4].

Review question / Objective: **1. In Lance-Adams syndrome, what is the effect of current therapeutic management on improving patients' condition compared with the control group? 2. Are EEG, Brain CT, MRI, and brain SPECT more accurate in diagnosing Lance-Adams syndrome? 3. Does Early diagnosis and treatment influence the quality of life in patients with Lance-Adams syndrome? 4. Are patients with abnormal cortical discharge or cerebellum brain stem and thalamus cortical circuit or neurotransmitter imbalance at higher risk for/of Lance-Adams syndrome compared with patients without these symptoms?**
Condition being studied: **LAS is a group of clinical symptoms; The primary manifestation is action myoclonus which can occur as generalized, focal, or multifocal repeated myoclonic motor movement myoclonus. In some patients, sensory stimuli can trigger myoclonus. Furthermore, negative myoclonus can impair posture and cause falls in the lower extremities.**

INPLASY registration number: This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 06 November 2022 and was last updated on 06 November 2022 (registration number INPLASY2022110025).

INTRODUCTION

Review question / Objective: **1. In Lance-Adams syndrome, what is the effect of current therapeutic management on improving patients' condition compared with the control group? 2. Are EEG, Brain CT, MRI, and brain SPECT more accurate in diagnosing Lance-Adams syndrome? 3. Does Early diagnosis and treatment influence the quality of life in patients with Lance-Adams syndrome? 4. Are patients with abnormal cortical discharge or cerebellum brain stem and thalamus cortical circuit or neurotransmitter imbalance at higher risk for/of Lance-**

Adams syndrome compared with patients without these symptoms?

Rationale: Lance-Adams syndrome usually occurs after cardiopulmonary resuscitation, while other recently reported conditions. This syndrome is less known, and there is no conventional treatment, imaging options, prognosis, and pathophysiology that made us review the available case and original article to show comprehensive details about this syndrome.

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METHODS

Search strategy: We searched databases, google scholar, PubMed, and Scopus using the terms including Lance-Adams syndrome [Title], Lance-Adams syndrome [Title/Abstract], Myoclonus after cardiac arrest: [Title/Abstract], (Myoclonus after cardiac arrest [Title/Abstract]) AND (MRI [Title/Abstract]), (Lance-Adams syndrome [Title/Abstract]) AND (MRI [Title/Abstract]), chronic post hypoxic myoclonus [Title/Abstract].

Participant or population: Every known case of Lance-Adams syndrome included in this study.

Intervention: One method for the treatment of LAS is globus pallidus- deep brain stimulation (GPi-DSB).

Comparator: There is no applicable comparator in this study.

Study designs to be included: A systematic literature review was conducted to identify every type of paper which explain every known aspects of this condition.

Eligibility criteria: Inclusion criteria: Every known case of Lance-Adams syndrome. Exclusion criteria: Texts not available in full text: study authors were contacted to provide full text. If no response was obtained, the study was excluded.

Information sources: We searched all published articles from electronic databases: google scholar, PubMed, and Scopus.

Main outcome(s): Every paper mentioned the Lance-Adams syndrome and is well described.

Data management: All variables considered relevant for comparing the studies, and measuring outcomes were extracted.

Quality assessment / Risk of bias analysis: Two independent reviewers assessed the risk of bias in each included study using the Cochrane Collaboration's risk of bias assessment tool28. They rated each study as having a "low risk of bias," "high risk of bias," or "unclear risk of bias," taking into account six domains: random sequence generation (selection bias), allocation masking (selection bias), blinding of participants and personnel (performance bias), blinding of outcome assessment (detection bias), incomplete outcome data, and selective reporting (reporting bias). The risk of bias rating was analyzed using Revman 5.1 software. Disagreements in bias assessment were resolved by a third-party evaluator (EIRG).

Strategy of data synthesis: Prioritized outcomes organized the selected body of evidence. We described the population's characteristics and the interventions' parameters within each outcome.

Subgroup analysis: This Study doesn't contain subgroup analysis.

Sensitivity analysis: Not planned.

Country(ies) involved: Iran, United States.

Keywords: Lance-Adams syndrome , cardiopulmonary resuscitation, myoclonus, movement disorders.

Contributions of each author:

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