Subject 優秀論文分享

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題目: Long-Term Stroke and Mortality Risk Reduction Associated With Acute-Phase Paxlovid Use in Mild-to-Moderate COVID-19

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摘要:

Background:

This retrospective cohort study investigated whether Paxlovid (nirmatrelvir/ritonavir) use during the acute phase of mild-to-moderate COVID-19 reduces the risk of ischemic or hemorrhagic stroke occurring more than 3 months post-diagnosis, a condition classified as long COVID.

Methods:

Utilizing TriNetX electronic health records comprising 118 million patients in the United States, adults aged 18 years or older with confirmed COVID-19 diagnoses from 2022 to 2023 were categorized into Paxlovid (administered within 5 days of diagnosis) and non-Paxlovid groups. Exclusion criteria included prior cerebrovascular disease, mortality within 3 months, use of specific antivirals, and severe clinical conditions such as ICU admission, intubation, mechanical support, SpO_2 < 90%, respiratory rate > 30/min, sepsis, systemic inflammatory response syndrome, and acute respiratory distress syndrome. The index date was the initial COVID-19 diagnosis. Propensity score matching in a 1:1 ratio controlled for confounding factors, and stroke (ischemic or hemorrhagic) and mortality were analyzed using Kaplan–Meier survival curves and Cox proportional hazards models.

Results:

Among 181 992 matched pairs, Paxlovid use was associated with a significantly reduced risk of ischemic and hemorrhagic stroke (hazard ratio [HR] 0.85; 95% confidence interval [CI]: 0.80–0.89) and all-cause mortality (HR 0.68; 95% CI: 0.63–0.73) during the long COVID period, defined as more than 90 days post-diagnosis. Subgroup analyses demonstrated consistent protective effects across age, sex, BMI, comorbidities such as hypertension, diabetes, and hyperlipidemia, and vaccination status. Notably, older adults (HR 0.81; 95% CI: 0.76–0.86) and individuals with metabolic conditions, including obesity (HR 0.86; 95% CI: 0.78–0.96), exhibited pronounced benefits, and the protective effects were observed irrespective of vaccination status.

Conclusion:

These findings highlight that Paxlovid use during the acute phase of COVID-19 significantly reduces the risk of long-term cerebrovascular events and mortality, emphasizing its critical role in mitigating long-term complications associated with COVID-19.

本研究顯示，在COVID-19初期使用Paxlovid可顯著降低長新冠時期發生缺血性與出血性腦中風以及死亡的風險，特別對老年人與代謝疾病患者效果更為明顯，無論疫苗接種狀態皆具保護作用，支持Paxlovid作為預防長期神經血管併發症的重要早期治療策略。