

Oseltamivir I.P.: A Comprehensive Review of A Key Neuraminidase Inhibitor in Influenza

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Abstract: *Oseltamivir (Tamiflu®) is a crucial, orally administered antiviral agent used for the treatment and prophylaxis of influenza A and B. It functions as an inactive prodrug that is metabolized in vivo to its active form, oseltamivir carboxylate (OC). OC is a potent and selective Neuraminidase Inhibitor (NAI), which acts by blocking the viral neuraminidase enzyme, thereby preventing the release and spread of newly formed influenza virions from infected host cells.*

Clinical efficacy is maximized when treatment begins within 48 hours of symptom onset in uncomplicated cases, helping to reduce the duration and severity of illness. However, it is recommended for use in high-risk or hospitalized patients regardless of symptom duration, due to its association with reduced mortality and hospitalization length. Oseltamivir is generally well-tolerated; common adverse events are mild and transient gastrointestinal issues (nausea/vomiting), often mitigated by taking it with food. A primary concern is antiviral resistance, mainly due to the H275Y mutation in Influenza A(H1N1) strains, necessitating continuous global surveillance to maintain treatment effectiveness..

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