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Abstract

This mini-review aims to evaluate a systematic review of the available literature on the efficacy of second-line treatments for Herpes Simplex Viruses (HSV) that are resistant to first-line antiviral agents. The systematic review included a search of six databases for eligible manuscripts using terms related to antiviral resistance, herpes, and HSV. A total of 137 articles were included in qualitative synthesis, examining the relationship between viral resistance to first-line treatments and potential second-line treatments in HSV. Of the included studies, 84.67% reported on HSV-1, with 34.31% of these studies reporting testing on resistant HSV strains. The following interventions were found to be effective as potential managements for resistant strains of HSV: nectin, amenamevir, methanol extract, monoclonal antibodies, arbidol, siRNA swarms, cucumis melo sulfated pectin, components from *oleano europaeae*, griffithsin, *morus alba* L., nucleosides, botryosphaeran, monoterpenes, almond skin extracts, borteomib, and flavonoid compounds. The available literature reviewed consistently supported the existence and potentiality of second-line treatments for HSV strains that are resistant to first-line treatments. Therefore, the review provided necessary information about treatment options for patients with resistant HSV infections, particularly those who are immunocompromised, and their providers.

Keywords: Infectious diseases; HSV; Drug resistance; Second-line treatment

Introduction

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