

Concurrent Cytomegalovirus Esophagitis and Herpes Simplex Virus Oral Ulcer in an HIV-Negative Patient

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Case Report: A 72-year-old man with history of oropharyngeal carcinoma in remission and immune thrombocytopenic purpura on chronic steroid, was transferred from an outside hospital for ENT evaluation of a nonhealing buccal ulcer. Prior to transfer, he underwent an esophagogastroduodenoscopy (EGD) with biopsy due to recent odynophagia and weight loss. During initial presentation, patient was found to be in acute hypoxic respiratory failure. Chest X-ray suggested pneumonia. Despite broad antibiotic therapy, his respiratory status worsened. The EGD biopsy was positive for cytomegalovirus (CMV) inclusions with negative herpes simplex virus (HSV) 1 stain. Later, CMV serologies and quantitative PCR came back positive.

Upon initiation of antiviral therapy, his respiratory status significantly improved. Biopsy of the buccal lesion was performed, resulting positive for HSV 1 and HSV 2 immuno-stains. Repeat chest x-ray after four days of antiviral medication demonstrated improvement of bilateral consolidations. The patient was stabilized and transferred back to the outside hospital for continued care.

Discussion: Cytomegalovirus (CMV) infection has been well-documented in immunocompromised patients. However, regardless of immune status, fulminant CMV infection in patients without HIV, is thought to be rare. Moreover, CMV infection involving other parts of the gastrointestinal tract and the respiratory system has not been well described in the literature.

CMV esophagitis with concurrent HSV oral ulcer has been described in several reports in patients with AIDS. Yet, this co-infection with CMV and HSV is exceedingly uncommon in the non-HIV infected population. The risks and prognosis associated with multiple viral infections at different sites along the gastrointestinal tract remains unclear.

Conclusion: This case demonstrates the importance of considering CMV infection in the setting of persistent fever, respiratory distress, or dysphagia in patients with prolonged steroid use. Furthermore, CMV and HSV infection can occur simultaneously at distinct ulcer sites, contributing to worsening odynophagia in the immunosuppressed patient without HIV.

Image

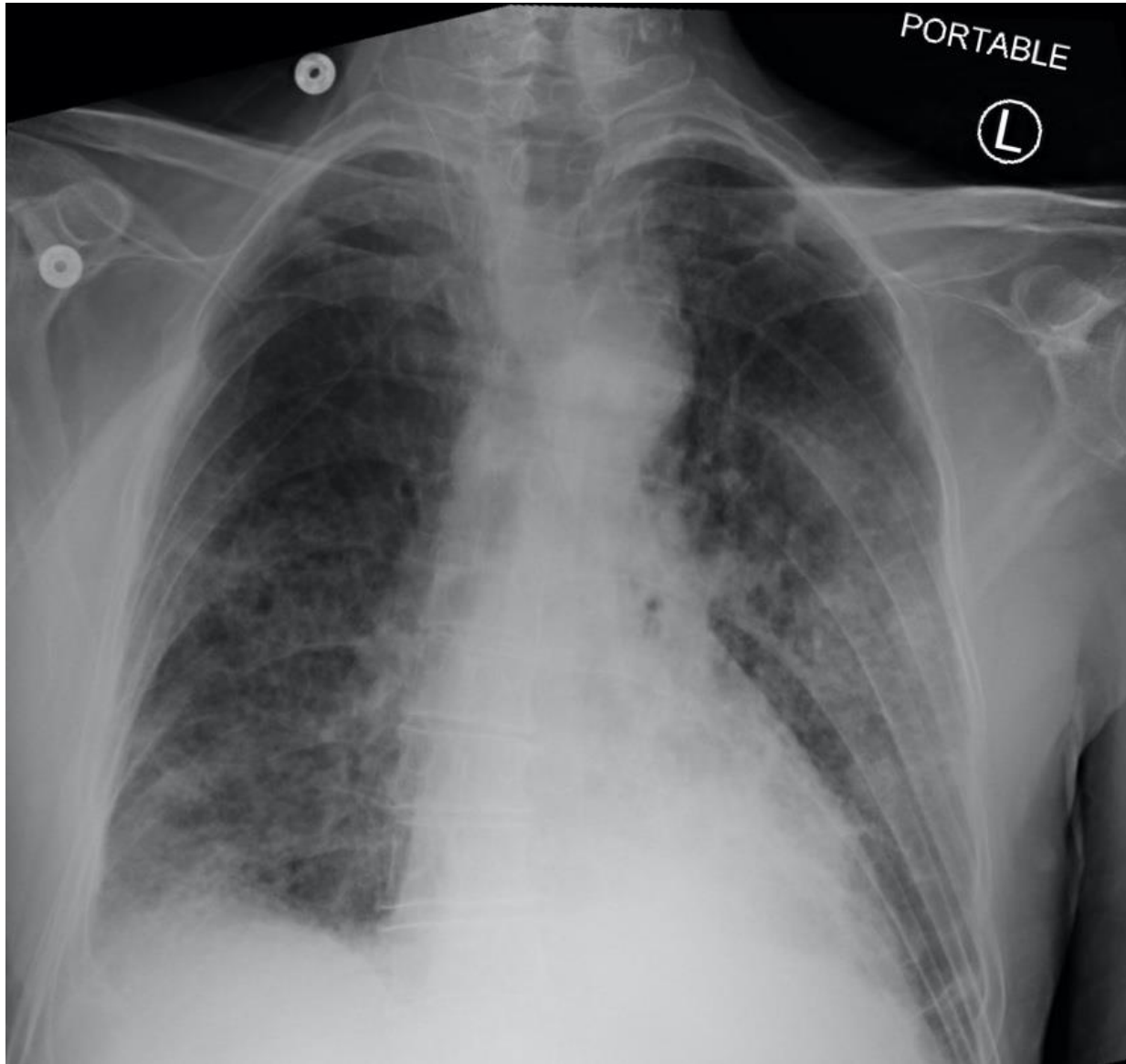


Image A (above): There are left perihilar, right mid and lower lung patchy opacities which may represent pneumonia or aspiration. There is left apical pleural thickening. Blunting of the right costophrenic angle may represent a small pleural effusion or pleural thickening. There is left costophrenic angle pleural thickening. There is a left paratracheal opacity, superior to the aortic arch, which may represent lymphadenopathy.

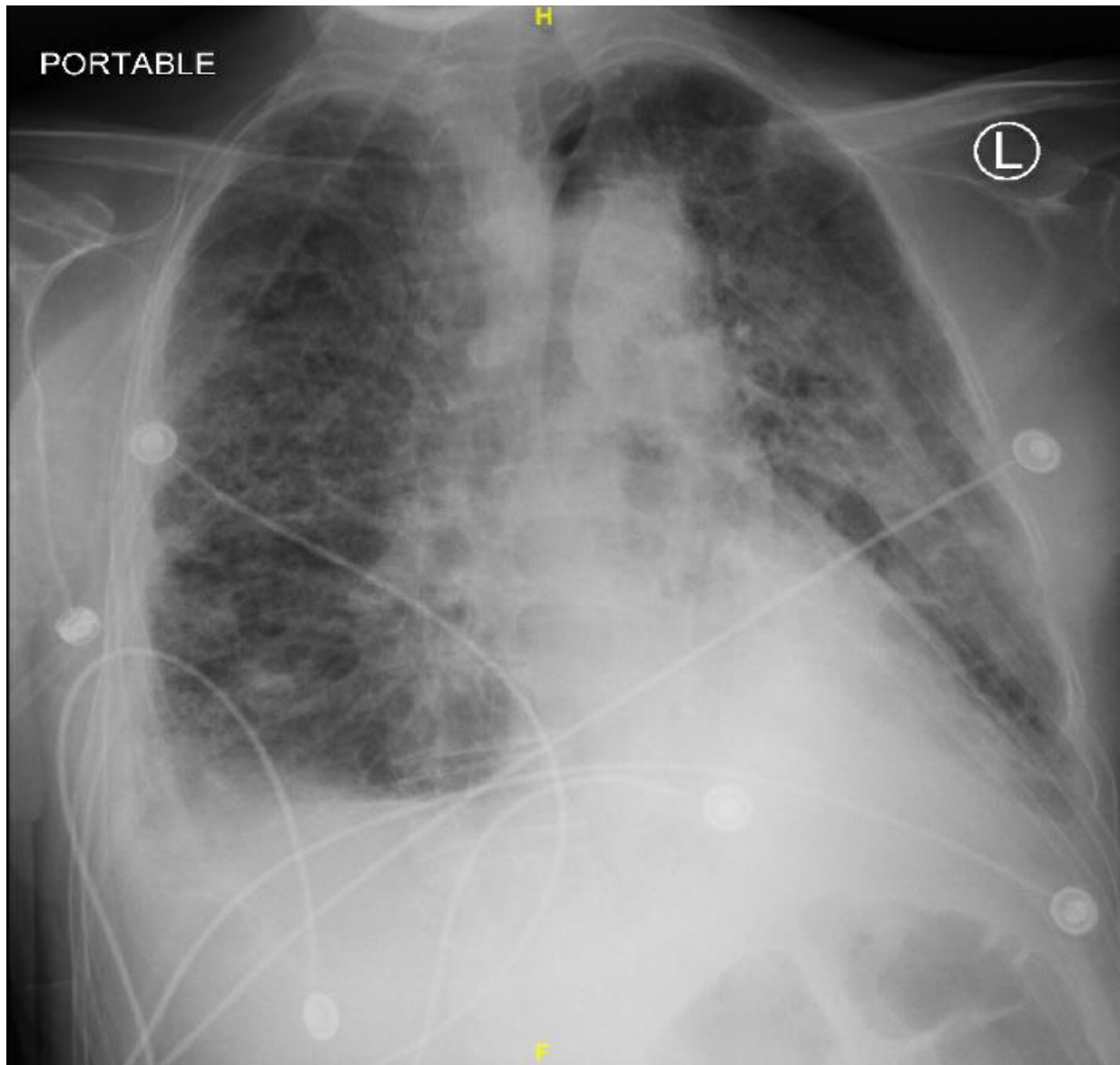


Image B (above): Chest X-Ray taken on day 6 of antibiotics, 3 days prior to initiation of antiviral therapy. A right basilar opacity is compatible with a layering pleural effusion. Associated atelectasis is also noted. Left perihilar and left basilar consolidation is also noted.

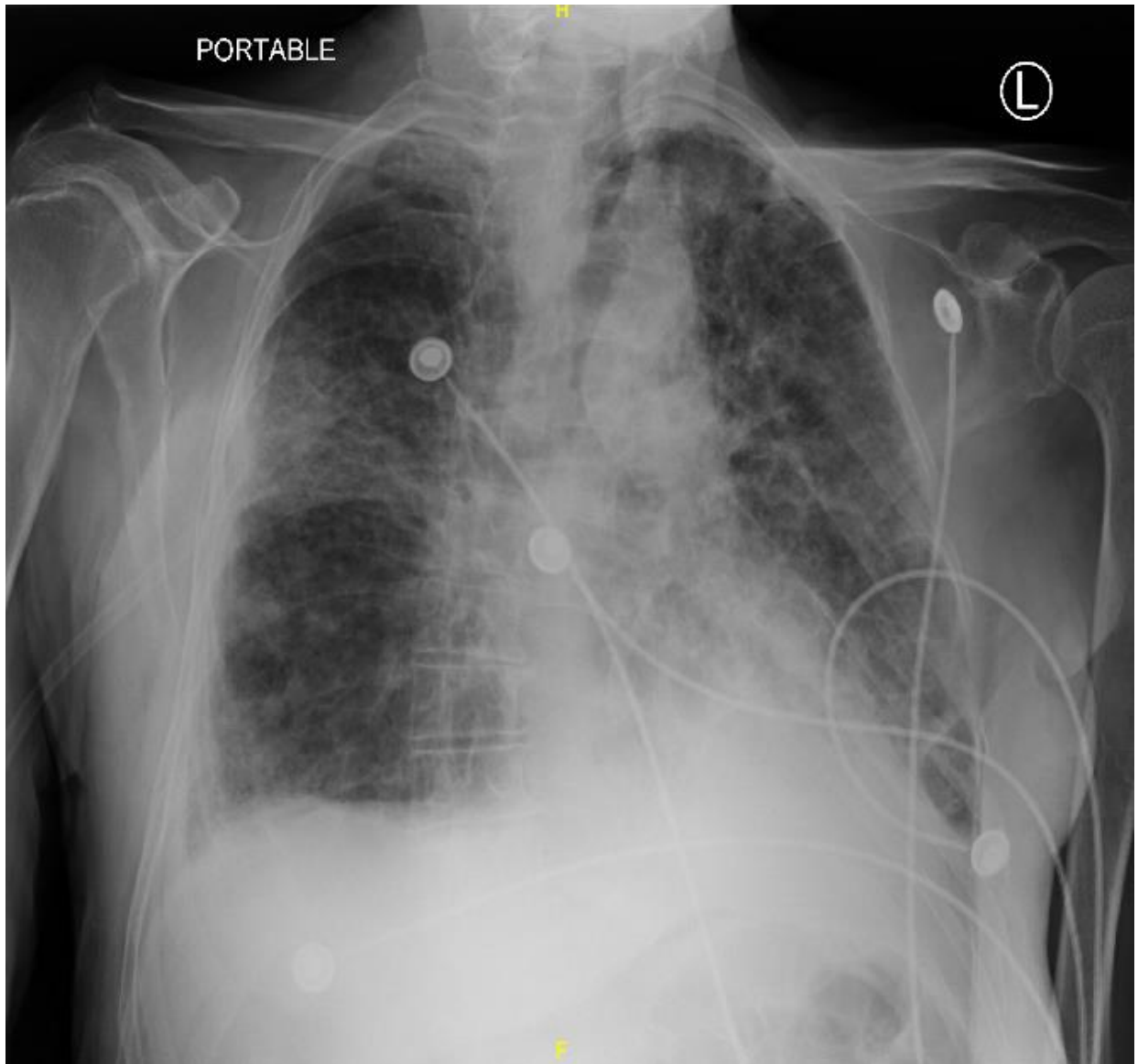


Image C (above): Chest X-Ray taken on day 4 of antiviral therapy. Bilateral upper and lower lobe consolidations decreased compared to image B. Bilateral pleural effusions are also decreased compared to image B.



Images D (above): CT Chest taken on day 9 of antibiotics, the day of antiviral initiation. Bilateral upper and lower lobe consolidations compatible with multifocal pneumonia. Moderate-sized pleural effusions and moderate-sized pericardial effusion is also noted. There is a spiculated nodule in the right middle lobe measuring 2 x 1.4 cm. Neoplasm is not excluded.

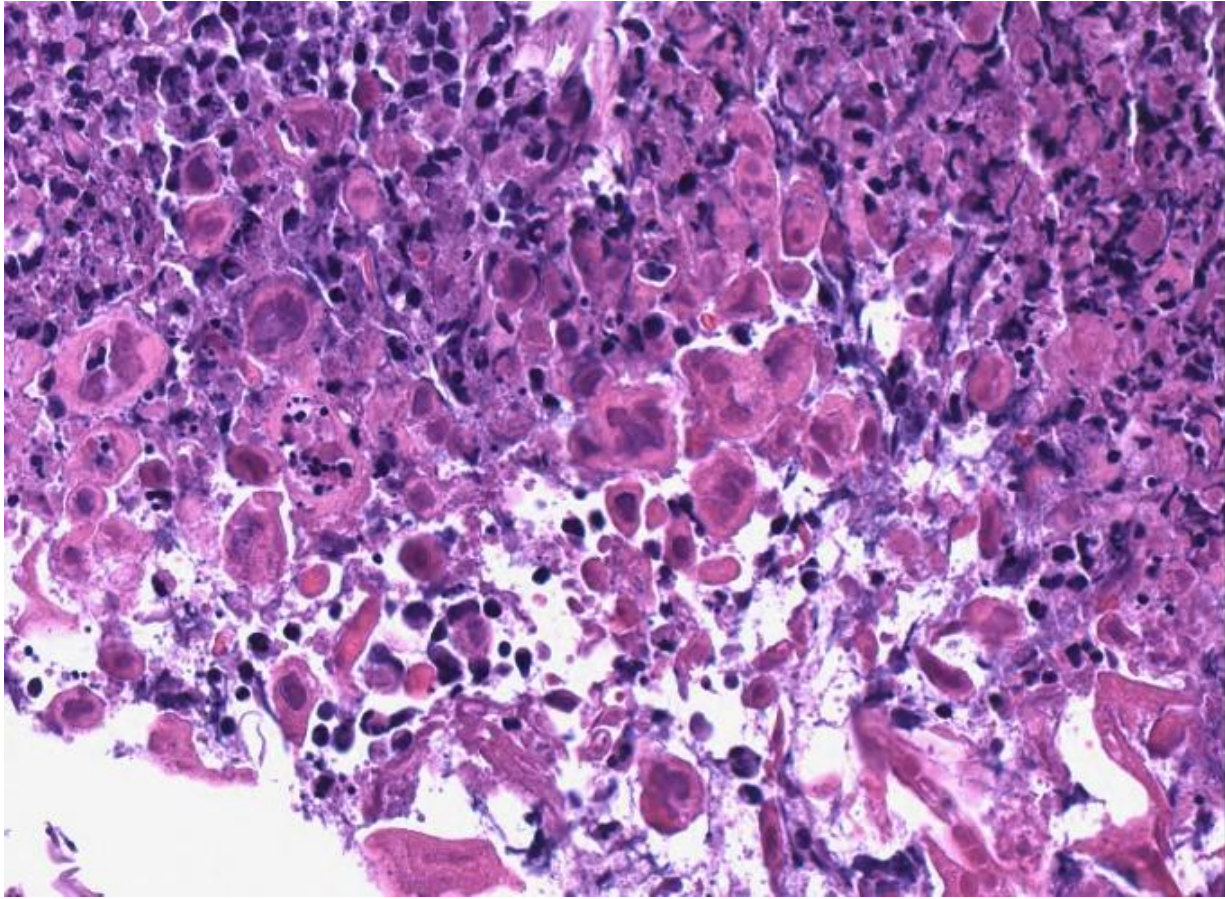


Image E (above): Hematoxylin and eosin stain of the left buccal lesion biopsy sample showed typical histology features of HSV infection, including the *molding* of nuclei, margination of *chromatin*, and multinucleation.

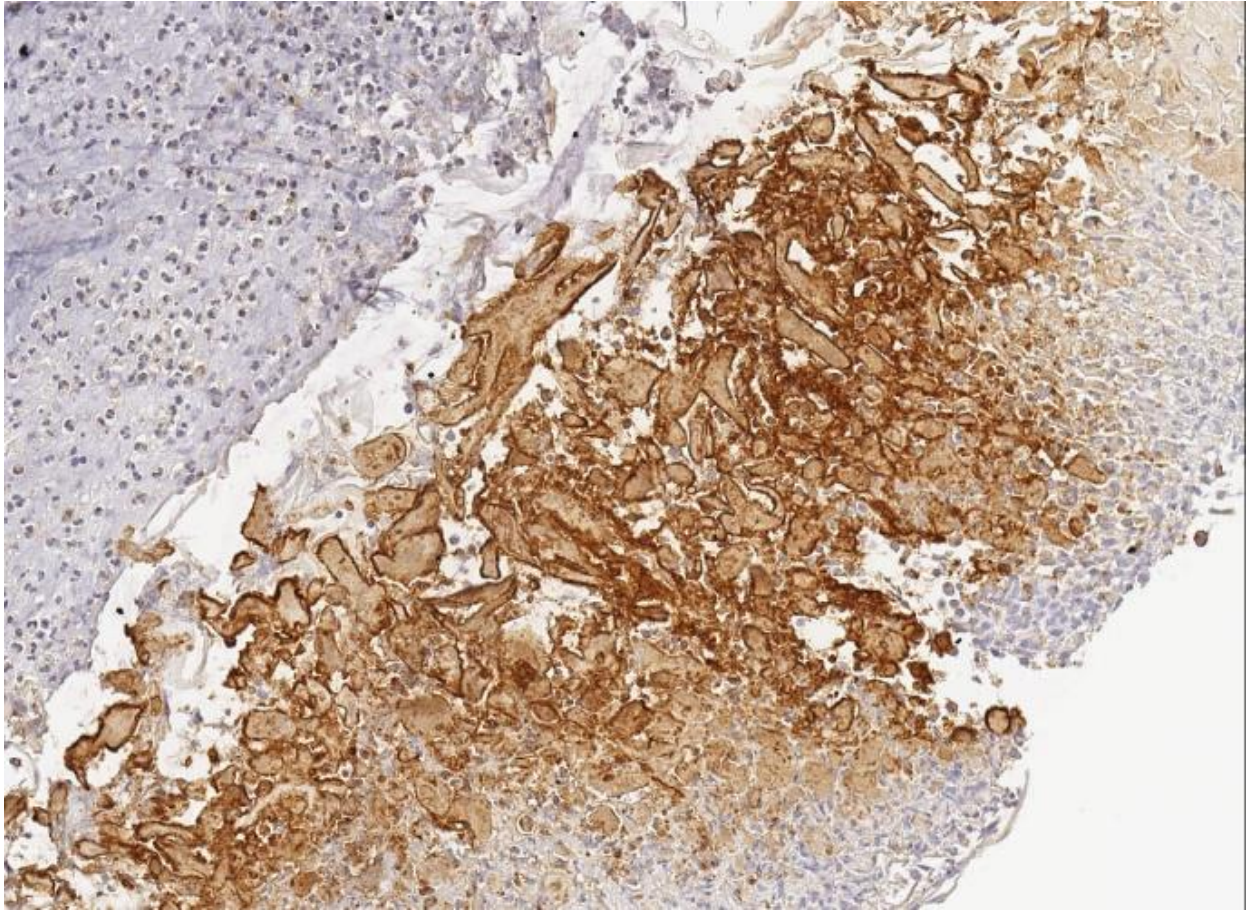


Image F (above): Immunohistochemistry stain of left buccal mucosa specimen specific for HSV1 was also positive.