

Presentation of HIV-associated thrombotic thrombocytopenic purpura and response to plasma exchange: A 10-year retrospective single-centre experience

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Abstract

Background: HIV is a significant aetiological factor in thrombotic thrombocytopenic purpura (TTP) in regions of high seroprevalence. Description of the presentation, response to therapy, and outcomes of HIV-associated TTP (HIV-TTP) is, however, limited by small case series. We here describe a large cohort of patients receiving plasma exchange (PEX) for HIV-TTP yet reported to better characterize the entity and to analyse the appropriateness of PEX as a treatment strategy.

Methods: We retrospectively reviewed 98 cases of HIV-TTP treated with PEX between 1/1/2010 – 31/12/2020. The presentation, and mortality and renal outcomes of this cohort are described, and complications of PEX therapy are characterised. The effect of HIV infection and HIV-TTP clinical severity on mortality, PEX complications, and renal outcomes are analysed using appropriate regression models.

Results: HIV-TTP is associated with advanced HIV infection and shows a predilection for young Black women. Neurological deficit is a common presenting feature. Mortality remains increased in HIV-TTP in patients receiving PEX; renal dysfunction increases mortality risk, as may choice of plasma infusant. Sepsis is not infrequent and contributes to mortalities; risk of infection increases with PEX duration. HIV infection parameters do not appear to affect risk of mortality or sepsis. Mild residual renal dysfunction is not uncommon in survivors.

Conclusion: Mortality remains high in HIV-TTP treated with PEX, and sepsis-related complications are of concern. Randomized prospective studies are required to evaluate the use of PEX versus plasma infusion (PI) and infusant choice in HIV-TTP. Longer duration follow-up studies are needed to evaluate residual renal dysfunction in survivors of HIV-TTP.