The role of neutralizing antibodies in HIV-1 infection following early intervention with ART

David G Bonsall*, Mark J Robinson, Jonathan Weber, Sarah Fidler, Myra O McClure and the SPARTAC trial investigators

Jefferis Trust Laboratory, Imperial College, London

Introduction

By what mechanism does the immune system naturally combat HIV? Why do some HIV-infected patients do better than others? The answers to these questions are of paramount importance to the development of new drugs and protective vaccines.

We characterized the impact of neutralizing antibodies (NAb) on HIV-1 control by assessing inhibition of viral replication in patients undergoing antiretroviral therapy (ART) using secondary transmitted variants (STV). Our studies show that these patients had high levels of antigen-specific antibodies, suggesting that high levels of antigen-associated with high VL may drive the production of Nab which fail to induce viral clearance.