Characterization of Dirofilaria repens Antigen Recovered from Human Patients and Its Comparison with Setaria equina Antigen

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Abstract:

Human dirofilariasis is a rare zoonotic infection manifested by inflammatory nodules wherever they are located and are occasionally confused with tumors. Therefore, come-up the role of the immunological diagnosis as a non-invasive procedure. Dirofilaria repens Excretory – Secretory (DrES) antigen, D. repens infected patient urine (DrU) antigen recovered from human cases and Setaria equina E-S antigen (SeES) from donkeys were fractionated using SDS-PAGE. Western blot analysis of these proteins against serum of the infected patient revealed several protein bands most of them were antigenic. They were collectively ranging between 100 kDa to 30 kDa. Most of the antigenic bands were shared except at 30kDa and 46kDa, which were exclusive for the (DrES). The present study was conducted to detect the antigenic pattern of the D. repens and S. equina antigens. In view of S. equina antigen diagnostic potential, most of (SeES) antigenic proteins was identified by the serum of D. repens infected patients and were also found to be excreted in the patient urine. S. equina worm antigens could be used as heterologous antigen in immunodiagnosis of human dirofilariasis.

Keywords:

Dirofilaria repens, Setaria equina, Excretory-Secretory antigen, Urine antigen, SDS-PAGE, Western blot.

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