Development and Immunosurveillance of Molecular Diagnostic Reagent for Zoonosis Schistosomiasis Japonica

Abstract

This study reports the efficacy of a immuno-diagnostic antigen, the 26 KDa glutathione S-transferase（26 KDa GST）, obtained from a Chinese strain of *Schistosoma japonicum* . The cDNA of 26 KDa GST from the total RNA of adult worm was synthesized and amplified by using reverse transcriptase-polymerase chain reaction（RT-PCR）, followed by the subcloning and sequencing. The recombinant protein of 26 KDa GST were then expressed in *Escherichia coli* strain M15. The results showed that sera from the mice immunized with either the native GSTs or recombinant GST26 can recognize the recombinant GST26（rGST26） and native GSTs. The level of anti 26 KDa GST IgG antibodies in infected patients was significant higher than in the normal controls. Antisera also recognized the reSjc26GST, purified from gene expression products, a 26 KDa protein on Western blot. These results suggest that the recombinant GST expressed in *E. coli* should be an effective diagnostic reagent for detection of antibody to *S. japonicum* in patients and no cross-reactivity. Due to the ease of produce, good sensitivity, and excellent specificity, the reSjc26GST described in this study are considered as a candidate protein for the immunological diagnosis of schistosomiasis.

Key words：*Schistosoma japonicum*；glutathione S-transferase；Immunological diagnosis