Chemiluminescent immunometric detection of SARS-CoV in sera as a early diagnosis of SARS

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SARS is a new epidemic with high lethality & infectivity, known the SARS-CoV was its pathogen. Till now, only way for controlling its spread is finding & isolating SARS cases in their early stage. Unfortunately none of the current assay fit such demand, hence a new sensitive technique for early diagnosis is extremely necessary. Recently a chemiluminescent immunoassay to SARS-CoV was developed, in which an antibody to SARS-CoV was labeled by HRP, another was coated in the microwell. In this assay, 50ul sera & the conjugator was added respectively followed by two hour incubation & washing, then chemiluminescence substrate was added and the signal was detected. Higher than 2.1 in S/N ratio was judged as positive. The experiments indicated high sensitivity to six of SARS-CoV strains from WHO, CDC, Beijing, Guangzhou & Hong Kong, the detectability was around 60PFU/ml, while without cross reaction to other coronavirus strains from human & animals. The clinic trial taken by the samples collected at the period of spread also represented outstanding result in early diagnosis: For the 19 cases identified by both of clinic & antibody detection, relevance ratio were 75%, 100%, 71% and 50% during the disease day of 1-5, 6-10, 11-15, 16-20. While the relevance ratio for 351 cases only identified by clinic were 56%, 72%, 42% and 24% respectively. The data above strongly suggested it perhaps could play an important role for early diagnosis of SARS. For this assay also can be applied in other samples, probably it will still act as one of tools in discovering the natural infection of SARS.