

06. Fungal infection & disease

6a. Fungal disease epidemiology

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Background Chronic pulmonary aspergillosis (CPA) is an uncommon and problematic pulmonary disease, complicating many other respiratory disorders. Measurement of *Aspergillus* specific IgG antibodies had a higher sensitivity than either IgM, IgA, or IgE and it should therefore be considered the most appropriate test for screening CPA. *Aspergillus* specific IgG antibody levels have been successfully used to monitor response of CPA to medical therapy. Recently, a novel rapid test for *Aspergillus* specific IgG antibody from Dynamiker Biotechnology (Tianjin) Co., Ltd. was released as a screening test of CPA. It is a fluorescent immunochromatographic cassette test which using a monoclonal antibody against *Aspergillus* specific IgG antibody and Europium nanoparticles (Eu NP) (figure 1). It is a semi-quantitative test which was easy to operate, rapid with portable detection devices, and can be widely accepted by clinical and primary medical (figure 2). We collect clinical samples to verify the detection performance of the Dynamiker Quic™ *Aspergillus* specific IgG antibody (LFA) test.

Methods

In total, 102 patients were included and 42 patients were diagnosed with CPA. The pathogen was identified from sputum, BALF culture, lung resection surgery, bronchos copy biopsy, percutaneous lung biopsy and BALF GM assay.

Results The sensitivity, specificity, PLR, NLR and Kappa index of the IgG antibody test were 78.6%, 94.4%, 14.0%, 0.23% and 0.72, respectively.

Conclusions The current work indicates that the Dynamiker Quic™ *Aspergillus* specific IgG antibody (LFA) test shows promising application in the diagnosis of CPA. The results are accurate and reliable, and it could be used as an aid for the early rapid screening test of CPA.

Figure 1

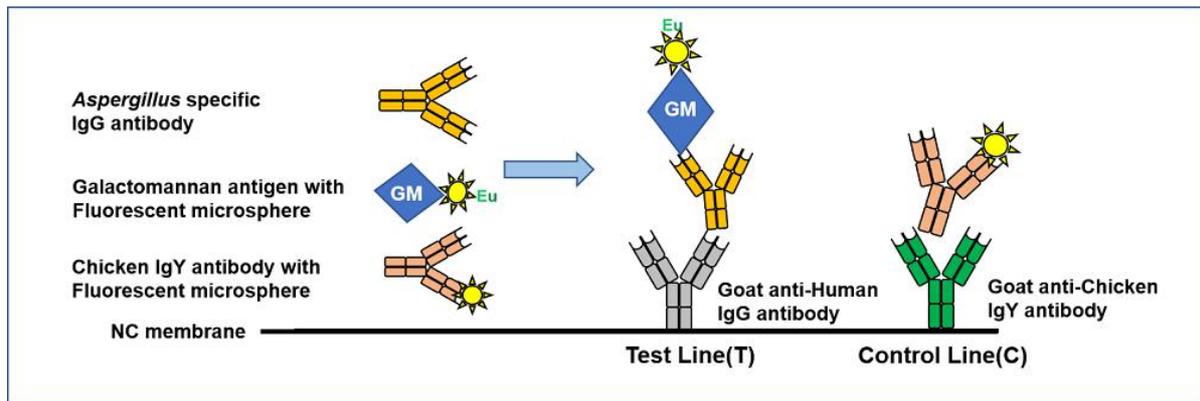


Figure 1 Diagram of the Dynamiker *Aspergillus* specific IgG antibody (LFA)

Figure 2

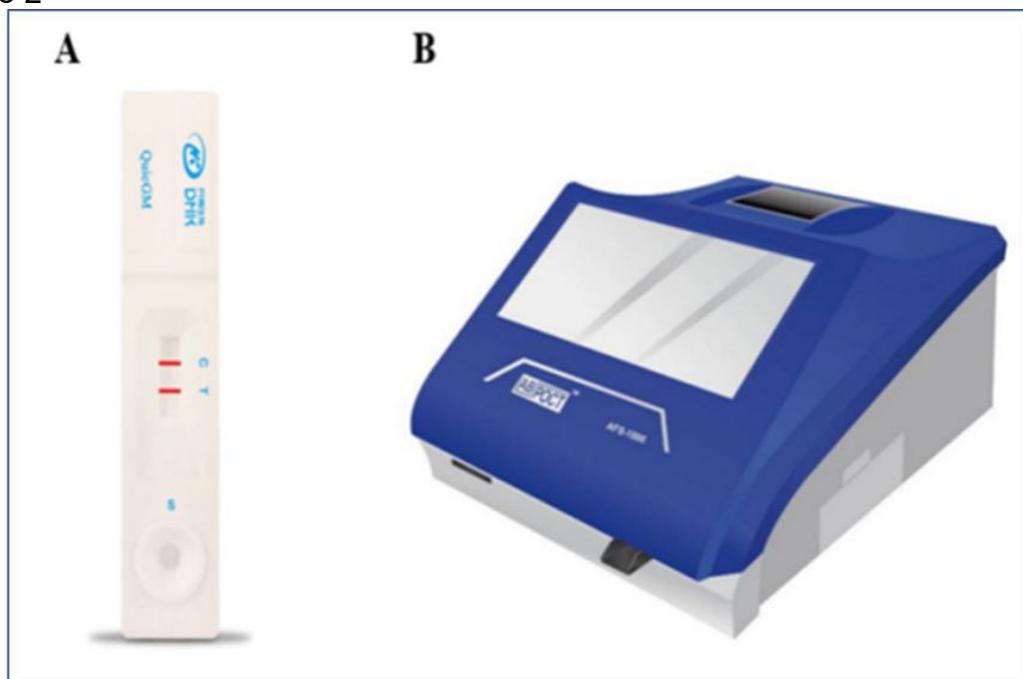


Figure 2 Dynamiker *Aspergillus* specific IgG antibody (LFA) (A) and its reader (B)

Keyword 1

CPA

Keyword 2

Aspergillus specific IgG antibody

Keyword 3

LFA

Conflicts of interest

Do you have any conflicts of interest to declare?

I have no potential conflict of interest to report