Title Updating of biological pathology procedures concerning the diagnosis of cysticercosis

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Aim

Cysticercosis is the infection of humans by the larval stage of *Taenia solium*, a tapeworm of the class Cestoda, that parasitises the small intestine. It is found primarily in tropical and sub-tropical regions, though it persists in some European countries. The three most commonly encountered forms of cysticercosis are: i) subcutaneous and muscular cysticercosis, ii) neurocysticercosis and iii) ocular cysticercosis. According to the WHO, 30% of cases of epilepsy worldwide could be ascribed to neurocysticercosis. This would represent between 2.56 and 8.30 million cases of neurocysticercosis per 50,000 deaths per year.
Cysticercosis is difficult to diagnose due to the low specificity of the clinical signs and to the time to onset of symptoms after infection. Biological diagnosis is based primarily on the detection of antibodies in serum or cerebrospinal fluid.

The aim of this work is to draw up the list of serological diagnostic techniques currently relevant to the diagnosis of cysticercosis.

Conclusions and results

The HAS considers that:

- the diagnosis of suspected cysticercosis involves the immunoenzymatic detection of circulating antibodies (EIA or ELISA) and by immuno-blotting (IB, Western Blot);
- where applicable, if neurocysticercosis is suspected, antibodies are detected in the cerebrospinal fluid by EIA and IB. This is then supplemented by detection of antigens in the cerebrospinal fluid by EIA;
- the other techniques should no longer be used: indirect haemagglutination (IHA), immunoelectrophoresis (IELP), electrosyneresis (ELS), coelectrosyneresis (COES), sensitised haemagglutination (HAGG), indirect immunofluorescence (IFI) and Ouchterlony double immunodiffusion (Ouchterlony-DID);
- serological monitoring of cysticercosis, with iterative search for serum antibodies used for screening serological diagnosis, is no longer indicated; monitoring is now performed by imaging.

Methods

The method involves conducting a critical analysis of available synthetic literature compiled with the position of professional bodies.

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