Diagnosis of porcine cysticercosis using lateral flow assay and HP10 Ag ELISA

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Introduction

- Cysticercosis is parasitic tissue infection with larval cysts of *T. solium* (pork tapeworm)
- Pigs are the intermediate hosts of *T. solium* and they get infected by ingesting *T. solium* eggs.
- Diagnosis is done by lingual palpation and using serological tests in the laboratory.

Objective

To compare the sensitivity & specificity of a new serological test against the HP10 Ag ELISA as the gold standard test.

Sampling Area

Busia District in Western Kenya

Life cycle of *T. solium*

Methods

Ag ELISA
Conducted ELISA in the laboratory to detect Cysticercosis antigens in sera (Gold standard test)

Rapid pen side test
Used lateral flow assays to detect Cysticercosis antigens in sera

Results

| LFA | HP10
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<tr>
<td>+</td>
<td>96</td>
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<tr>
<td>-</td>
<td>71</td>
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<td>Total</td>
<td>167</td>
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Test sensitivity -73.84%
Test specificity -66.67%
Kappa index-0.38

The LFA test is still undergoing further developments but with an initial sensitivity of 73.84% and specificity of 66.67% and a kappa index of 0.38 it has clear potential to be developed and used for diagnosis purposes in the field.

167 samples tested positive out of 343
130 samples tested positive out of 343

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