

Detection of antibodies against *Helicobacter pylori*

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Antibodies against *Helicobacter pylori* in the serum can be detected by various immunological and serological techniques such as immunoblotting, immunofluorescence, hemagglutination, complement fixation, latex agglutination test and others. However the most common method is indisputably ELISA - it is a simple, fast, cheap and reliable technique. However, the specificity and sensitivity of the method is highly dependent on the antigen used - from the whole cells, through the ultrasound sonicate, glycine extract to protein purification. In 1989, HM-CAP, high molecular weight cell-associated protein, were isolated with a sensitivity and specificity of 95 %.

Serological detection of antibodies to *Helicobacter pylori* is of clinical importance especially for long term observation after treatment and for monitoring the success of *Helicobacter pylori* eradication. The decrease of the IgG to < 50 % after 6 months of the treatment shows specificity of 95 % and sensitivity 97 %. Indications include screening patients who are at risk, such as kidney transplant patients, where helicobacter infection increases the risk of peptic ulcer and bleeding.

Antibodies against *Helicobacter pylori* can be also detected in saliva and urine samples by immunological methods. There are many *rapid tests* which detect antibodies against *Helicobacter*. For example, by performing capillary blood sampling of whole blood, and with the use of immunoaffinity chromatography, we get the result after a couple of minutes. Sensitivity and specificity of these tests are relatively low - 70-85 %.

The serological diagnosis of antibodies to *Helicobacter pylori* also includes the detection of *cagA*, *vacA* and *iceA* antigens, the presence of which specifies *Helicobacter pylori* strains with higher pathogenicity. These antigens are detected with help of classic ELISA tests on the microtiter plates or PCR techniques. Demonstration of *Helicobacter pylori* and its strains by PCR methods is in the phase of clinical testing, it is not used in routine diagnostics yet. The diagnostic significance of the determination of antibodies to *Helicobacter pylori* is still the subject of research, it is not suitable for screening programs.

SENZITIVITA A SPECIFICITA TESTŮ NA Hp		
TEST	SENZITIVITA	SPECIFICITA
HISTOLOGIE = 3 BIOPSIE	95	89
RYCHLÝ UREAŽOVÝ CLO TEST	80	88
KULTIVACE	80	89
SEROLOGIE PROTILÁTEK	85	79
PROTILÁTKY VE SLINÁCH	81	73
PROTILÁTKY V MOČI	88	91
RAPID MONOTESTY	71	88
DECHOVÝ TEST = UBT	95	86
DETEKCE ANTIGENU VE STOLICI	83	83

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Sensitivity and specificity of the *H. pylori* test

Links

Related Articles [modify | edit source]

- Diagnosis of *Helicobacter* infection
 - Carbon-13 labeled urea breath test
 - Detection of *Helicobacter pylori* antigen in stool

References

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