

## PRELIMINARY DATA CONCERNING PRIMARY DETECTION OF HCV INFECTION USING SMART TUBE™

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### Abstract

**Aim:** Primary detection of anti- HCV antibodies using SMART method in patientes with C hepatitis diagnosis hospitalized at the Clinical Hospital „ Dr. V. Babes” Timisoara in the 1- 31. 05. 2007 period.

**Material and methods:** There were taken under observation 27 patients with confirmed C hepatitis diagnosis, representing 17,76% from the 152 cases hospitalized in this period for presumption of C hepatitis infection.

We used two method:

1. **SMART TUBE™**

2. **ELISA**

1. SMART TUBE™ ( 70 µl diluent + 40µl sample, cut off= 0,140), is a pre- treatment of the blood sample, that increases the sensibility of usual detection tests for anti-HCV antibodies, shortening artificially the sero- negative period and emphasizing positive tests in a few days after infection.
2. ELISA method was performed using KIT DIALAB HCV ELISA 3.0 ( 100µl diluent +10 µl sample) procedure.

**Results and discussions:** From the 27 patients observed 10 were men, 17 were women between 21 and 75 years, most of them between 50- 75 years ( 18 subjects), only 9 patients between 21- 50 years. The diagnosis was put depending of the absorbance obtained using the two methods: SMART and ELISA.

From all the patients with C hepatitis diagnosis, 4 were positive only with the SMART method, the other 23 patients were positive with both methods. It was observed, that using the SMART method the absorbance obtained was higher than using the ELISA method, proving the higher sensibility of the first assay.

### Conclusions:

1. Pre-treatment with SMART Tube™ enhances the sensibility of the usual tests that evidence the anti-HCV antibodies, shortening artificially the sero- negative period by evidencing the positive tests in just a few days from the infection.

2. The SMART Tube™ method allows an early and correct identification of all the infected persons.

3. It can be used in association with other usual antibody detection tests.

4. It` s an economic and profitable solution that don` t requires complex equipment.

5. It lowers and can reduce significantly the epidemiologic risk.

6. Where is no possibility for donor screening, this method helps to eliminate infected units from the blood banks.

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