

PENGGUNAAN URINE SEBAGAI SARANA DIAGNOSTIK INFEKSI VIRUS HEPATITIS A PADA ANAK

(Sjamsul Arief, Boerhan Hidayat, Maretha Sukmawardani)

SMF Ilmu Kesehatan Anak Fakultas Kedokteran Universitas Airlangga Surabaya

ABSTRAK

Penelitian bertujuan mencari alternatif lain dari sampel darah untuk mendeteksi antibodi hepatitis A pada anak dengan memakai sampel urine, karena pengambilan sampel darah merupakan tindakan invasif, tidak disukai anak dan orangtua, sulit dan memerlukan tenaga ahli.

Penelitian dilakukan di Rusun Sombo Kecamatan Simokerto Surabaya tahun 2005 pada anak usia 5-12 tahun. Sampel darah dan urine segar diambil sebanyak 2,5 cc kemudian diuji serologis dengan ELISA yaitu metode MEIA dengan alat AxSYM ® HAVAB ® 2.0. Hasil kemudian dianalisa statistik uji Mc Nemar. Didapatkan 46 anak dengan hasil seropositif dan 6 anak uropositif.

Hasil analisa statistik menunjukkan perbedaan bermakna antara sampel darah dan urine dalam mendeteksi antibodi hepatitis A pada anak. Hal ini mungkin disebabkan karena IgM tidak dapat menembus glomerulus, sedangkan IgG hanya dapat menembus pori besar glomerulus pada keadaan tertentu atau juga karena kadar imunoglobulin yang sangat rendah di bawah batas yang dapat dideteksi oleh alat yang dipakai. Sehingga pemakaian urine sebagai pengganti sampel darah perlu dipikirkan kembali.

Kata kunci : hepatitis A, imunoglobulin, urine, darah, serum, uji serologis, ELISA

URINE SAMPLE AS a TOOL FOR DIAGNOSIS HEPATITIS A VIRUS INFECTION IN CHILDREN

(Sjamsul Arief, Boerhan Hidayat, Maretha Sukmawardani)

Pediatrics Division of Medical Faculty, Airlangga University Surabaya

ABSTRACT

The purpose of this research is an alternative to substitute blood sample for detection hepatitis A antibody. As blood sample is an invasive technique, discomfort for parents and children, difficult in technique and need trained person.

This research held in Rusun Sombo District Simokerto Surabaya, in 2005. Samples were children between 5-12 years old. Blood and urine samples were taken each 2,5 cc then were tested with ELISA (MEIA methode) by AxSYM ® HAVAB ® 2.0. All samples were analyze with Mc Nemar test which result 46 samples were seropositif and 6 samples were uropositif.

The result showed a significant different between blood and urine sample for detection hepatitis A antibody in children. This might be caused by level of antibody in urine is under the lower threshold that could not be detected by the instruments, or might be large molecule such as IgM could not pass glomerulus filter and only IgG could pass glomerulus filter by big pores under certain condition. The use of urine as a sample for detection hepatitis A antibody in children must be reconsidered.

Keywords : hepatitis A, immunoglobulin, urine, blood sample, serum, serologic test ELISA