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REAGENT STRIP TEST SCREENING FOR ASYMPTOMATIC BACTERIURIA DURING PREGNANCY

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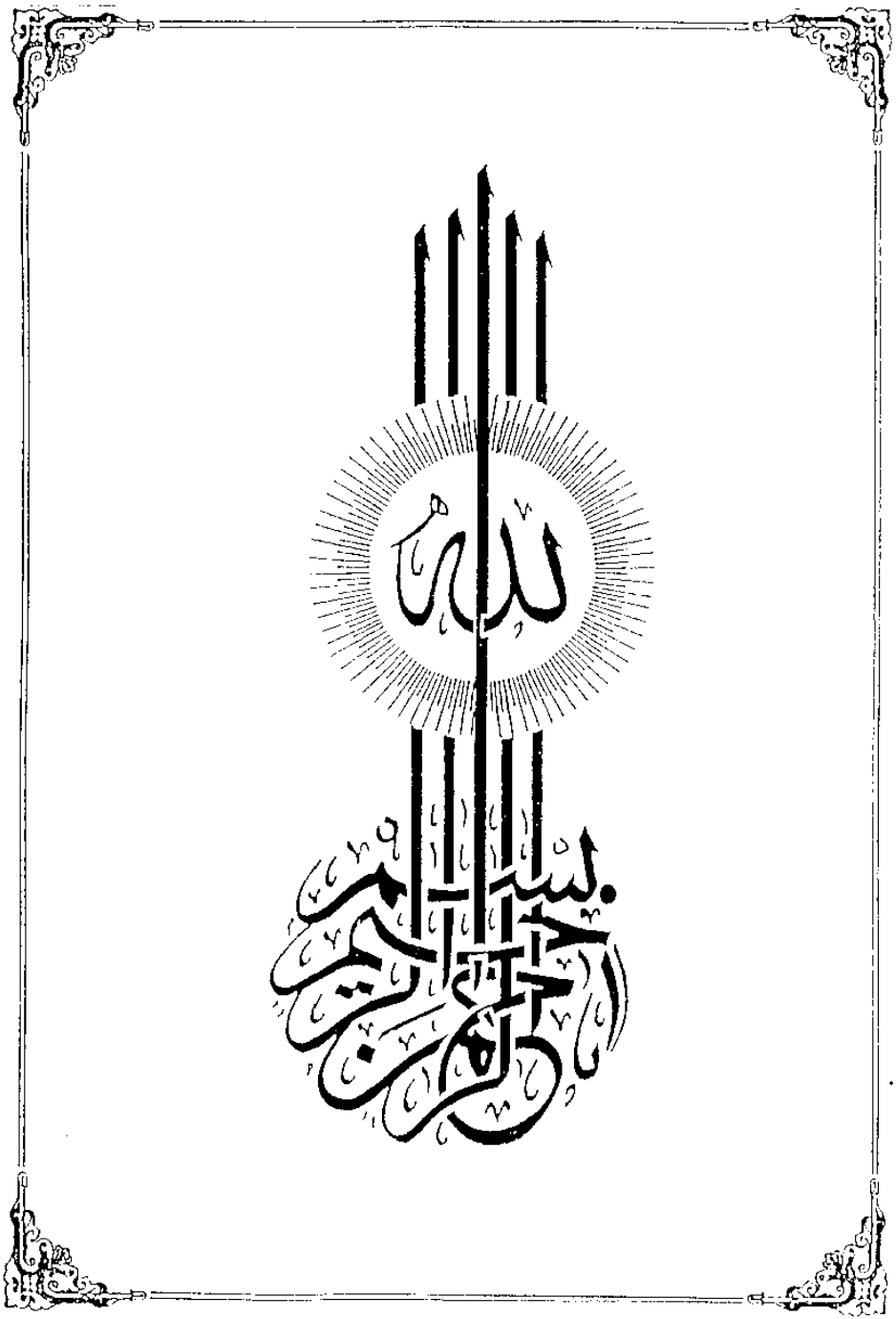
بسم الله الرحمن الرحيم

قَالُوا سُبْحَانَكَ لَا عِلْمَ لَنَا إِلَّا مَا
عَلَّمْتَنَا إِنَّكَ أَنْتَ الْعَلِيمُ الْحَكِيمُ.

صدق الله العظيم
البقرة - ٣٢ -



TO:

MY PARENTS

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Urinary tract infection is a common disorder in both pregnant and non pregnant women. It is the most common bacterial infection during pregnancy. This is because pregnancy predisposes to the development or exacerbation of this disorder by anatomical and functional changes induced in urinary tract by normal pregnancy. **(Editorial. Lancet 1985).**

Organisms that cause urinary tract infection are those from the normal flora which in most cases have gained urinary tract access before pregnancy, specially *E.coli* which shows pili which enhance their virulence by allowing bacterial attachement to glycoprotein receptors on uroepithelial cell membrane. These bacteria are not washed out by normal urine flow, and multiplication and invasion follow **(Svanborg-Edin et al., 1982).**

Urinary tract infection in pregnancy has been associated with many adverse outcomes such as preterm

delivery, low birth weight, and increased perinatal morbidity and mortality **(Patrick, 1967, Neage 1979, Mac Donaled, 1983, Mc Grady et al., 1985, Shultz, 1991).**

Bacteriuria of pregnancy compromises three different but interlinked clinical problems namely: asymptomatic or covert bacteriuria, acute cystitis, and acute pyelonephritis **(Hankins, 1985).**

Asymptomatic bacteriuria is defined as the persistant actively multiplying bacteria ($>10^5$ organisms/ml) within the urinary tract without symptoms. Its prevalence during pregnancy varies from 2 to 12% and depends on parity, race, and socioeconomic status. The highest incidence has been reported in black multiparas with sickle cell trait and the lowest in white women with low parity **(Marshall, Lindheimer & John Davison, 1990).**

If asymptomatic bacteriuria is not treated, about 25-38% of infected women will develop the more severe form "acute pyelonephritis" which often required hospitalization and

intravenous therapy **(Whalley et al., 1975)**. On the other hand if asymptomatic bacteriuria is detected and treated early in pregnancy only 1% of women will develop acute pyelonephritis. **(Harris, 1979).**

Acute pyelonephritis has recently shown to cause varying degree of respiratory insufficiency in pregnant women. This is caused by endotoxin induced alveolar damage **(Cunningham et al., 1978).**

Anaemia usually develops due to *RBCs* destruction by lipopolysaccharide released from the multiplying bacteria **(Cox & Colleages, 1988b)**.

So, all pregnant women are routinely screened for the presence of asymptomatic bacteriuria at their prenatal assessment.

Full bacteriological analysis is time consuming and expensive. So, this could be replaced either by Microscopic examination of urine or by the more easier and less expensive reagent strip testing *(R.S.T)* **(McNeely et al., 1987; Robertson and Duff 1988; Etherington & James 1993).**

AIM OF THE WORK

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1- To compare reagent strip testing (R.S.T) with Microscopic examination of urine, and bacteriological culture of urine, in detecting asymptomatic bacteriuria of pregnancy.

2- To consider potential cost saving if reagent strip testing *(R.S.T)* screening proved to be a reliable method for detection of asymptomatic bacteriuria.