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Sexually transmitted diseases in pregnant women in Lusaka

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SUMMARY

The prevalance of sexually transmitted diseases has been known to be high in many African countries and preliminary investigations in Lusaka revealed a similar trend in Zambia.

This paper presents an analysis of diagnoses made in 170 symptomatic pregnant women referred to the sexually transmitted diseases clinic and the screening results of 163 pregnant women in a routine antenatal examination. A high prevalance of gonococcal infection as well as syphilis was discovered in pregnant women. The implications of these findings on the possible complications and outcome of pregnancy are discussed and remedial measures suggested.

INTRODUCTION

The prevalance of sexually transmitted diseases (S.T.D.) has been known to be high in many developing countries of Africa (Arya, Nsanzumuhire and Taber, 1973; Friedmann and Wright, 1977; Verhagen and Gemert, 1972; Osaba, 1974 and Anne Retel-Laurentin, 1974). Preliminary investigations at the University Teaching Hospital (U.T.H.) in Lusaka, have indicated a similar trend. Gonorrhoea was a predominant disease in both male (27%) and female (19.8%) patients in the S.T.D. Clinic and gonorrhoea was also discovered in 46% women admitted to U.T.H. with pelvic inflammatory disease (Ratnam, Din and Chatterjee, 1980). These investigations also revealed a high prevalance of syphilis. Since syphilis and gonorrhoea in pregnancy are known to produce serious consequences the present study was undertaken to assess the extent of this problem in pregnant women and to evaluate the antenatal care presently available in Zambia.

PATIENTS AND METHODS

From a large number of about 7,000 pregnant women seen in the antenatal clinics at the U.T.H., 163 women were selected at random for this study over a period of three months. These 163 women had no symptoms pertaining to S.T.D.

Detailed histories were obtained and all the women were subjected to a complete venereological examination. Saline suspensions of vaginal discharge were examined for trichomonads and candida. Grams stained preparations of endocervical smears were examined for gonococci and at the same time cultures were made on modified Thayer-Martin medium. Cultures were examined at 24 and 48 hours and gonococcal infection was identified when typical oxidase positive colonies consisting of gram negative diplococci were observed.

VDRL and TPHA tests were performed on blood samples collected from all women and serological diagnosis of syphilis was made only when both tests were reactive.

In addition, case records of 170 pregnant women who had been referred to the S.T.D. clinic with relevant symptoms in the preceeding 6 months were also reviewed. These sysmptomatic pregnant women had undergone similar investigations as the non-symptomatic group from the antenatal clinic with the exception that only an automated reagin test was performed for serological diagnosis of syphilis. However, darkfield examinations were

carried out in all cases with clinical lesions.

RESULTS

The majority of women in both the symptomatic and non-symptomatic groups were aged between 15 and 30 years. (Table 1).

In the symptomatic group of 170 pregnant women 11.8% were single. Gonococcal infection was diagnosed in 22.9% and clinical signs of syphilis were present in 7.6% women. However, automated reagin test was positive in as many as 15.9% including all those with clinical signs. Trichomoniasis and candidiasis were identified in 52.9% and 23.5% respectively. Other diagnoses made in the decreasing order were non-specific vaginitis (14.1%), non-specific ulcer (9.4%), chancroid (7.6%), genital warts (2.9%), lympho-granuloma venereum (2.4%) and genital herpes (2.1%).

In the non-symptomatic group of 163 pregnant women 6.8% were not married. Gonococcal infection was discovered in 11.8%. Although, none of these women had clinical signs of syphilis, 17.8% of sera gave positive reactions to both VDRL and THPA tests. Trichomoniasis and candidiasis were diagnosed in 35.6% and 9.2% respectively.

Among the 333 pregnant women investigated altogether in these two groups gonococcal infection was present in 58 (17.4%) and syphilis was provisionally diagnosed in 52 (15.6%) and both the infections were present in 12 (3.6%) women. Together there were 110 (33.0%) women who had either one or both infections. As many as 22.4% of women with gonococcal infection and 38.6% with syphilis were seen in the third trimester of pregnancy (Table 2).

DISCUSSION

Penicillin therapy continues to be very effective for syphilis and its sustained benefits are widely appreciated all over the world by the paucity of late complications of syphilis in the antibiotic era. However, after an initial decline, the prevalance of early infectious syphilis has shown a rising trend again since 1960 and congenital syphilis, the outcome of early infectious syphilis in women of reproductive age continues to be a major complication of syphilis, especially in the developing countries.

The prevalance of positive reactions to serological tests for syphilis (STS) in our investigation highlights the problem in Zambia. As far as we are aware, non-venereal treponematoses have not been reported in this country and hence, we believe, the high rate of positive STS should indicate the prevalance of venereal syphilis. It was of great concern that 48% of pregnant women with positive STS in the symptomatic group had been found with condylomata lata. Congenital syphilis is a common problem in our pediatric wards and the present investigation suggests that syphilis may be also responsible for significant pregnancy wastage.

The high prevalance of gonococcal infection among these pregnant women was also significant since similar studies in USA and Canada have revealed a prevalance rate about 5% (Cave et al, 1969; Waters

TABLE I

	Routine Antenatal Screening (n=163)	Pregnant patients in STD Clinic (n=170)
Age Range	%	%
15 to 20 years	36.2	28.2
21 to 25 years	35.0	37.7
26 to 30 years	15.3	26.5
31 to 35 years	9.2	4.1
Above 35	4.3	3.5
UNMARRIED WOMEN	6.8	11.8
Gestational Period		
First Trimester	18.4	33.5
Second Trimester	35.0	43.6
Third Trimester	46.6	22.9
Diagnosis		
Gonorrhoea	11.7	22.9
Syphilis		
Primary and Secondary	Nil	7.6
STS Positive	17.8**	15.9*
Trichomoniasis	35.6	52.9
Candidiasis	9.2	23.5
Non-specific Vaginitis	Nil	14.1
Non-specific Ulcer	Nil	9.1
Chancroid	Nil	7.6
Genital Warts	Nil	2.9
Lymphogranuloma Venereum	Nil	2.4
Genital Herpes	Nil	2.1

* Automated Reagin Test Positive
** VDRL and TPHA both positive

TABLE II

GONORRHOEA AND SYPHILIS IN PREGNANT WOMEN AT UNIVERSITY TEACHING HOSPITAL

Total number of Women screened .. 333		
Number of women who had either one or both infections .. .. .. 110 (33.0%)*		
Gestation Age	**Gonorrhoea (n=58)**	**Syphilis (n=52)**
	%	%
First Trimester	37.9	26.9
Second Trimester	39.7	34.5
Third Trimester	22.4	38.6

* Both infections were discovered in 12 women

and Roulston, 1969). It is increasingly recognized that gonococcal infection during pregnancy may also have serious complications.

Although uncommon, gonococcal salpingitis in early pregnancy tends to be more severe compared to similar infection in non-pregnant women (Acosta, Mabray and Kaufman, 1971). Pregnant women also have an increased risk of disseminated gonococcal infection (Holmes, Counts and Beaty, 1971). In addition to the classical gonococcal ophthalmia in the newborn, gonococcal infection during pregnancy has also been associated with an increased risk of foetal loss and low birth weight (Sarrel and Pruett, 1968).

In women, gonorrhoea as well as syphilis can be asymptomatic or produce few symptoms which are not easily recognized. Such undetected infection in women has been a major problem in the STD control since they are a source of infection to others and also pregnancy in such women brings the more serious problem of foetal infection. However, pregnant women do not need extra motivation to undergo screening for syphilis and gonorrhoea if these tests become part of a routine antenatal examination. These tests have to be performed at the first antenatal visit and it is also important to repeat them in the late pregnancy to detect infection that occurred during pregnancy. It is often observed that men feel more free to have extra marital sex when the wife is pregnant with the plea that they cannot have sex at home as often as they wish. Thus, the pregnant woman has a greater risk of acquiring STD brought home by the husband from the extra marital exposures.

However desirable, routine screening of pregnant women for STD may not be feasible in developing countries. Cultural identification of gonococcal infection is not an easy procedure and can at best be recommended only at large teaching hospitals. On the other hand, untreated syphilis in pregnancy has more serious consequences and priority has to be given for VDRL screening of all pregnant women. However, although VDRL is a simple test to perform, it may not be possible to screen every pregnant woman because of poor antenatal attendance rates and also lack of adequate facilities in many health centres. Because of the high prevalance of syphilis in Zambian women, it would be advisable to give the benefit of a full therapeutic dose of penicillin to every pregnant woman in the absence of a VDRL test result. The safety of penicillin therapy in pregnancy has been well established and a single dose of 2.4 mega units of benzathine penicillin would be an ideal choice.

It would be advisable to educate all prospective parents on the special problems of STD in pregnancy and their prevention. The protective advantages of using condom during pregnancy may well be recommended to married couples, especially those among the high risk group.

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