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PREVALENCE OF URINARY TRACT INFECTIONS IN PATIENTS WITH GESTATIONAL DIABETES MELLITUS.

Aims of Study

The prevalence of urinary tract infections in patients with gestational diabetes mellitus has not been well studied as in non-pregnant women with diabetes mellitus and lacks appropriate comparison data from non-diabetic pregnancies (1-3). The aim of this study was to determine the prevalence of urinary tract infections in women with gestational diabetes mellitus and compare this with the prevalence in normal pregnant women and to ascertain if there are any associations between the presence of infection and obstetric complications in both groups.

Methods

Microbiologic evidence of urinary tract infections was studied in 447 pregnant women with (n=149) or without (control group, n= 298) gestational diabetes mellitus after mid-pregnancy. Laboratory investigations included chemical analysis, microscopic examination and culture of a clean mid-stream voided urine specimen.

Results

The results are presented in table 1 and 2. As can be seen, the two study groups were similar. Nineteen women (4.2%) had asymptomatic bacteriuria (7 study, 12 control, p=0.7). Of these, 7 (38%) developed symptomatic infection despite treatment with antibiotics (2 study, 5 control, p=0.7) and 6 (31%) had recurrence later in pregnancy (3 study, 3 control, p=0.3). Twelve more women (2.6 %) had symptomatic infection (5 study, 7 control, p=0.5), 7 had acute cystitis (3 study, 4 control, p=0.5) and 5 had acute pyelonephritis (2 study, 3 control, p=0.7). The incidence of preterm labor, pregnancy-induced hypertension and fetal growth retardation was not significantly increased in patients with urinary tract infections compared to those who did not have this complication. *Escherichia coli* was the commonest pathogen accounting for 23 (74%) infection episodes.

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Table 1. Demographics of study subjects (N=447).

	Diabetic group (N=149)	Non diabetic group (N=298)
Age (years)	32.4±5.6 †	31.4±5.4
Parity	6.4±1.3	5.4±1.2
Type of treatment		
a-Diet	131(88) ‡	-
b-Insulin	18 (12)	
Body weight at sampling (kg)	87.2±23.2	71.4±17.6
Gestational age at sampling (week)	29.6±2.4	29.1±3.1
Maternal hypertension	15 (10.1)	28 (9.3)
Other diseases	11 (7.3)	19 (6.3)

Table 2. Obstetric outcome in study subjects (N=447).

	Diabetic group (N=149)	Non diabetic group (N=298)
Asymptomatic bacteriuria	7 (4.6) †	12 (4)
Symptomatic infections	5 (3.3)	7 (2.3)
a- Acute cystitis	3 (2)	4 (1.3)
b-Acute pyelonephritis	2 (1.3)	3 (1)
Preterm labor	9 (6.1)	22 (7.3)
Pregnancy-induced hypertension	8 (5.3)	18 (6)
Fetal growth retardation	10 (6.7)	25 (8.3)

† Mean ±SD

‡ Values in parenthesis are percentage.

Conclusions

Gestational diabetes mellitus was not associated with increased risk of urinary tract infections nor of maternal and perinatal morbidity as a result of infection.

Key words Bacteriuria, diabetes mellitus, gestational, infections, urinary tract.

References

1. Gestational diabetes mellitus: Risk factors, obstetric complications and infant outcomes. *J Reprod Med* 1998; 43: 272-378.
2. Pregnancy complications among diabetic women: Review 1965-1985. *Obstet Gynecol Surv* 1987; 42: 140-149.
3. Risk factors for urinary tract infection in the postpartum period. *Am J Obstet Gynecol* 1999;181: 547-553.