

TABLE I. CLINICAL RESPONSE

Symptom	Response (%)			
	Negative 1 wk after end of treatment		Negative 1 month after end of treatment	
	Group A	Group B	Group A	Group B
Leucorrhoea	73	60	72	54
Vaginal erythema	85	94	76	79
Vulval pruritus	80	80	71	75
Vulval erythema	88	83	81	79

Side-effects were minimal, of short duration and not severe. One patient complained of each of the following: dizziness, abdominal cramps, nausea, diarrhoea and muscle stiffness.

Discussion

Overall, both the clinical signs and symptoms responded more predictably than the mycological findings and the latter should

be regarded as the 'gold standard' for the evaluation of results. Because there was no statistically significant difference between the dosage schedules employed, it appears that a total dose of 400 mg of itraconazole would produce a cure rate approaching 75% 1 month after the end of therapy. This treatment regimen is cost-effective and should maximise compliance.

The cure rates obtained in a study⁴ using ketoconazole 100 mg twice a day for 5 consecutive days were 96% at 1 week and 92% at 4 weeks, while the cure rates for intravaginal econazole nitrate⁵ 150 mg/d for 3 days and 50 mg/d for 14 days were 84,9% and 92,4%. Thus although the cure rates are lower with these dose levels of itraconazole, the advantages are better patient compliance and lower cost to the patient.

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Significance of bradycardia during antenatal fetal heart rate monitoring

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Summary

All antenatal fetal heart-rates recorded over 15 months were examined for moderate basal bradycardia (100 — 120/min). There were 5644 tests in 3894 fetuses of which 104 (2,7%) demonstrated bradycardia. This study group was then compared with a randomly selected control group. Fetal outcome (measured by intra-uterine death, number of fetal movements, 5-minute Apgar score and birth weight for gestational age) was similar for the study and control groups. Moderate fetal bradycardia does not seem therefore to indicate fetal jeopardy and delivery for this reason *per se* is probably unjustified. To avoid unnecessary interference for fetal distress, the range of the normal heart rate should be extended and 100 - 120/min included as normal.

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The importance of the basal fetal heart rate as an indication of fetal distress has declined since electronic fetal heart-rate monitoring was introduced. More attention is now given to decelerations, accelerations and long-term baseline variability.^{1,2} In the report on a recent study in this unit it was suggested that basal bradycardia was unrelated to poor perinatal outcome.³ Since this study did not specifically investigate basal bradycardia, it was decided to examine its clinical significance during antenatal fetal heart rate monitoring.

Subjects and methods

All antenatal fetal heart rate tracings recorded between 1 October 1984 and 31 December 1985 were examined for basal bradycardia. There were 5644 tests in 3894 fetuses. In 104 (2,7%) the heart rate varied between 100/min and 120/min and in 3 patients it was below 100/min.

By selecting the test done immediately after the one demonstrating bradycardia, a control group was selected. Fetuses in the study and control groups were then compared for indications for the tests and perinatal outcome. A Hewlett-Packard cardiocytograph was used for all recordings and a paper speed of 3 cm/min was used throughout. During all the tests mothers were asked to indicate fetal movements by pressing the event indicator of the monitor.

Results

Since there were only 3 fetuses with a basal fetal heart rate < 100/min, they were excluded from further statistical analysis. All

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3 babies were born normally and no abnormalities were found at postnatal follow-up. There were more mothers with post-term pregnancy ($P < 0,05$) and suspected intra-uterine growth retardation in the study group (Table I), but the difference was only significant for post-term pregnancy (chi-square test 4,39; $P < 0,05$). Preterm labour (before 37 completed weeks) occurred in 18 mothers (17,3%) in the study group and in 21 (20,1%) in the control group.

TABLE I. INDICATIONS FOR ANTENATAL FETAL HEART RATE MONITORING

	Study group		Control group	
	No.	%	No.	%
Pre-eclampsia	7	6,7	11	10,6
Post-term pregnancy	18	17,4	8	7,7
Suspected growth retardation	38	36,6	26	25,0
Hypertension	2	1,9	3	2,9
Diabetes	6	5,7	3	2,9
Antepartum haemorrhage	2	1,9	6	5,8
Reduced fetal movements	12	11,5	20	19,2
Other	19	18,3	27	25,9
Total	104	100,0	104	100,0

The two groups of patients did not differ in regard to age, parity, duration of the test, number of fetal movements during the test and 5-minute Apgar scores. Gestational ages and birth weights were also not significantly different (paired t -test) (Table II). Fetal movements in the control group ranged from 1 - 42 with a mean of 8,6 during 15,5 minutes of monitoring. In the study group the fetal movements ranged from 0 - 36 with a mean of 8,5 during 14,5 minutes of monitoring.

Discussion

The outcome of pregnancy in which the fetus had moderate bradycardia was measured in several ways. Firstly, there were no intra-uterine deaths although no steps were taken to induce labour once the diagnosis of bradycardia had been made. Apgar scores, birth weights and duration of pregnancy were also no different from that of the control group. There was no explanation for the fact that more fetuses in the study group were post-term when the gestational age of the two groups did

TABLE II. COMPARISON OF MEANS BETWEEN BRADYCARDIA AND CONTROL GROUPS

	Bradycardia group	Control group	P-value
Age (yrs)	25,2	26,0	$P > 0,05$
Parity	1,3	1,4	$P > 0,05$
Duration of test (min)	15,5	14,5	$P > 0,05$
No. of fetal movements during test	8,5	8,6	$P > 0,05$
5-min Apgar score	9,2	9,1	$P > 0,05$
Birth weight (g)	3076	3053	$P > 0,05$
Duration of pregnancy (mo.)	39,0	38,6	$P > 0,05$

not differ significantly. A possible reason for this is that the clinicians who ordered the tests were not exact in their diagnosis and probably included many mothers who went beyond their expected dates of delivery. When the number of fetal movements was compared with the minimum given as necessary by Sadovsky *et al.*⁴ (12 in 12 hours), it is clear that this was within normal limits.

Although moderate bradycardia (100 - 120/min) did not give any indication of fetal compromise, the possibility of a congenital abnormality (causing heart block) should, however, always be kept in mind. This condition is, however, usually associated with severe bradycardia.⁵ Delivery for moderate fetal bradycardia *per se* is definitely not indicated and it should be regarded as a variation of normal.

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