

# EARLY DIAGNOSIS OF MULTIPLE PREGNANCY

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*The possibilities of early diagnosis of multiple pregnancy are shown, which helps to prevent and reduce the incidence of premature deliveries.*

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Multiple pregnancy carries a great threat to the pregnant woman and, namely, is a hazard to the fetus (Bieniarz 1957, Powolny 1965, Sternadel 1967*d*). The best way for keeping perinatal mortality low is an early diagnosis of multiple pregnancy and a prophylactic hospitalisation, which results into a decreased rate of premature deliveries (Novotny et al. 1959). In order to attain better prenatal care of pregnant women we have developed a procedure likely to make the diagnosis of multiple pregnancy more effective and thus help preventing abortions and premature deliveries.

From January 1967 to May 1972, over a total of 17,625, 148 multiple deliveries occurred in our Institute, 146 women giving birth to twins. Twin deliveries over 24 weeks of gestation have been investigated in the present study.

## RESULTS AND DISCUSSION

As shown in Table 1, only 39% of twin pregnancies lasted longer than 38 weeks; in 34.9% of cases, duration of gestation was 35-37 weeks; the average duration of gestation being 36 weeks. Approximately, this is in agreement with the reports of other authors (Aaron and Halpern 1955, Graves et al. 1962, Sternadel 1968). Premature deliveries (under 38 weeks) account for 61%. In the material of Slomko and Kuczynski (1965*a*), the rate of premature deliveries was 55.2%.

Table 2 shows that the percentage of pregnancies carried to term was 42.8 in the group of intellectual workers, 40.8 in the group of physical workers, and 26.9 in unemployed women. We have noted from the anamnesis that the majority of housewives did their housework in standing position. The high percentage of deliveries under 38 weeks of gestation (61%) has been closely related to lack of appropriate diagnosis and failure to institute preventive treatment.

The data presented in Table 3, showing the duration of hospital stay before delivery and the duration of pregnancy, support Brown's view (Brown and Dixon 1963), advocating hospitalisation of women with multiple pregnancy from the 30th week of gestation. Examination of his material, namely, of the group of pregnant women hospitalised since

Table 1. *Duration of Gestation and Parity*

Weeks of gestation	Primiparae		Multiparae		Total	
	N	%	N	%	N	%
40	3	3.4	2	3.4	5	3.4
38-40	30	34.5	22	37.3	52	35.6
35-37	34	39.1	17	28.8	51	34.9
32-34	13	15.0	10	16.9	23	15.8
28-31	6	6.9	4	6.8	10	6.9
24-27	1	1.1	4	6.8	5	3.4
Total	87	100.0	59	100.0	146	100.0

Table 2. *Duration of Gestation and Occupation*

Weeks of gestation	Unemployed women		Physical workers		Intellectual workers		Total	
	N	%	N	%	N	%	N	%
40			4	5.6	1	2.0	5	3.4
38-40	7	26.9	25	35.2	20	40.8	52	35.6
35-37	8	30.8	24	33.8	19	38.8	51	34.9
32-34	5	19.2	10	14.1	8	16.4	23	15.8
28-31	3	11.5	6	8.5	1	2.0	10	6.9
24-27	3	11.5	2	2.8			5	3.4
Total	26	100.0	71	100.0	49	100.0	146	100.0

Table 3. *Duration of Gestation and Period of Hospitalisation before Labor*

	Weeks of hospitalisation				Total
	1	1-2	2-4	4	
Number of pregnant women	134	6	4	2	146
Average duration of gestation (in weeks)	35	39	39	40	36

the 30th week of gestation, shows that premature deliveries were 37.2%, whereas in the other pregnant women prematurity reached 50.7%.

Table 3 shows the average duration of gestation in the different groups of our patients divided according to the duration of hospital stay before labor. It is significant that out of 12 patients admitted to the hospital more than one week before delivery, 5 had been sent to the hospital on account of gestosis, one with cardiac disorder, and 6 others owing to the irregular contractions of the uterus. Multiple pregnancy was diagnosed upon hospital examination. Bed confinement prolonged the duration of gestation. The higher percentage of premature deliveries in the group of women leading an active life might be related to the "physiological" cervical inadequacy in cases of multiple pregnancy in the third trimester of gestation. Such a condition is a further indication to hospitalisation after the 30th week of gestation (Eastman and Williams 1956). Proper management of multiple pregnancy can only rest on early diagnosis. The analysis of the cases referred to the hospital showed that the proper diagnosis of multiple pregnancy or suspicion of such a pregnancy was placed in 7.5% of cases only.

This is probably due to objective diagnostic difficulties and relatively rare occurrence of multiple pregnancy, which make the physician overlook such cases.

A detailed review of the material as a whole led us to draw up a list of basic points which could help the physician in diagnosing multiple pregnancy in out-patient clinic conditions.

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### 1. Anamnesis

- a.* multiple pregnancy in the past
- b.* familial occurrence of multiple pregnancy
- c.* previous administration of hormonal drugs (gonadotropins, clomide, progestogens)

### 2. Observation of pregnancy

- a.* early occurrence of gestosis
- b.* impending abortion
- c.* polyhydramnios

### 3. Medical examination

- a.* uterus enlarged out of proportion with respect to the duration of gestation
- b.* palpation of three big parts of the fetus
- c.* auscultation of two fetal heart-beats in two different sites (when the frequencies are different)

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The physician should take into consideration all the items from the anamnesis and the examination, and should refer all suspected case to the hospital. In the lying-in conditions, with the help of modern diagnostic methods (ultrasonography, radiography, fetal electrocardiography and phonocardiography, hormonal investigations), it is possible to accurately diagnose multiple pregnancy and to decide how to treat the patient.

In our material, about 10% of women with multiple pregnancy delivered before 32 weeks of gestation. The remaining 90% of deliveries took place in the final 8 weeks of pregnancy when, in compliance with the above indications, preliminary diagnosis of multiple preg-

nancy would be possible under out-patient clinic conditions. The hospital is equipped with modern facilities and therefore is in a position to make a reliable diagnosis.

Apparently, in spite of the relatively rare occurrence of multiple pregnancy and the seemingly limited significance of this problem in the general care of the pregnant woman, progress in this field should be achieved.

It may be concluded that (1) a much earlier diagnosis of multiple pregnancy is possible following the procedure advocated here, and (2) earlier hospitalisation prolongs the duration of pregnancy.