Acta Genet Med Gemellol 37:187-192 (1988)

Maternal Recognition of Twin Pregnancy

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Abstract. In a retrospective survey of 336 mothers of recently born multiples, 71% reported suspicions of twin pregnancy prior to medical confirmation. Primiparous and multiparous reports of symptoms may be utilized to significantly increase the early diagnosis of the presence of multiples.

Key words: Twin pregnancy, Maternal diagnosis, Pregnancy management

INTRODUCTION

Multiple gestations are commonly associated with preterm labor [5]. Worldwide, the perinatal mortality rate for twins approaches 100 per 1,000 maternities, a figure which compares most unfavorably to the range of 8-10 deaths per 1,000 singleton births [12]. Several factors commonly contribute to the high perinatal mortality rate among multiples – abnormal presentations, anoxia, and growth retardation, among others. The most significant factor, however, is the high rate (10-20 %) of very low birth weight (less than 1,500 g) among twin gestations [8,11]. The severity of the problem can be exemplified by the fact that multiple gestations, which constitute only approximately 1% of all births, account for a full 20% of infants born before 30 weeks [5].

The recognition of the association between multiple gestation and perinatal mortality has resulted in a growing awareness of the need for early diagnosis of twin pregnancies [1,2,6,14].

Improved outcomes for twin pregnancy have been reported using a variety of management techniques, including reduction of maternal activity, bedrest, cervical cerclage, tocolysis, and high protein diet [5,6,9,11]. Although antenatal management techniques frequently approach twin pregnancy from different points of view,

in all cases implementation of the policy is contingent on the diagnosis of multiple gestation. Regardless of the technique applied, it is generally believed that maximum effectiveness in reducing the risk of preterm labor depends upon the early implementation of the therapy [3,4,5].

Early diagnosis of multiple birth is desirable for psychosocial as well as medical reasons. Parents who are mentally and emotionally prepared for multiples report less stress in the first few months after birth. They are able to arrange for help and prepare sufficient clothing, equipment, and space to meet the extra needs. Early diagnosis also provides parents and siblings with the requisite time to begin to acknowledge and accept the tremendous life change which inevitably follows the advent of multiples [7,10].

Unfortunately early screening techniques for multiple pregnancy are not always available, nor are they 100% reliable. As result, the diagnosis of twins may occur too late to allow the effective implementation of the pregnancy management techniques [13] or the possibility of healthy family adjustment, including the development of support systems.

Twin pregnancies can be diagnosed by a number of direct and indirect methods, all of which have varying degrees of success. Among the methods are extensive examination of maternal health history, measurement of the height of the fundus, sonography, and measurement of alpha-fetoprotein levels. Of these, sonography is the most reliable method, but as yet it is not routinely used in the United States as a screening technique [9]. At times, the diagnosis of multiple gestation by sonogram is a byproduct of its use in amniocentesis for other diagnostic purposes. In general, the use of sonograms as a screening method for multiple birth depends upon clinical suspicion of multiple birth.

In this article we report the results of two uncontrolled retrospective questionnaire surveys of mothers of twins. These surveys were made to determine whether reports of the factors which led mothers to suspect twin pregnancy independently of their physicians' diagnoses may be useful in the improvement of the early diagnosis of twin pregnancy.

METHOD

In 1978-80, questionnaires were administered to 336 women (100 American, 236 Canadian) who had recently given birth to multiples. The subjects were recruited through the Canadian and U.S. mothers-of-twins organizations, Parents of Multiple Births Association, and National Organization of Mothers of Twins Clubs. Questionnaire results did not differ significantly between the two national groups, and therefore were combined for purposes of analysis. The subjects from each country were randomly distributed with respect to place of origin within each country.

The paper-and-pencil questionnaire consisted of 25 questions and required about 30 minutes to complete. Subjects were assured of anonymity in their responses. Information requested consisted of data on the twins' siblings and parents,

on the medical conditions of pregnancy, on diagnostic procedures employed, and on the dates within the pregnancy on which mother, father, nurse, and physician, respectively, suspected the presence of twins.

RESULTS

Of the 336 mothers, 239 or 71.1 % reported that they suspected twins before medical confirmation. The Figure shows the cumulative percent of parental suspicion or self-diagnosis of twin pregnancy. Approximately 50% of the self-diagnosing mothers made their diagnoses in advance of medical confirmation, an average of 2.8 months before a medical diagnosis was made. The self-diagnosing remainder suspected twins in the same month that medical confirmation was made. In the Figure the parental curve rises earlier and more steeply while the medical curve begins to rise at the same steep rate as the parental curve after the fifth month of pregnancy. By the end of the fifth month 51% of mothers had diagnosed twins, but only 13% had medical confirmation. It took until the end of the eighth month, another three full months, for medical diagnosis to pass the 50% mark. By the end of gestation 71% of the mothers had diagnosed twins, and 68% had medical confirmation. Of the 32% of pregnancies who were never medically diagnosed, 3% (11) had been suspected by the mothers. Data, available only for the U.S. sample, show that half of the women who diagnosed twins were multiparous and half were primiparous.

Table - Signs and symptoms used most frequently in maternal self-diagnosis of twin pregnancy (N=239).

	Number of cases	(%)
Size and/or weight gain	171	(72)
Greater fetal movement	101	(42)
Separate fetal movement	57	(24)
Dreams of twin birth	57	(24)

The questionnaire listed 21 alternatives to determine what symptoms and signs the mothers used in their self-diagnoses. Of these, four appeared frequently (Table). Since some of the mothers reported using more than one symptom, the percentages total more than 100. Size and/or weight gain was used most frequently, with 72% of self-diagnosing mothers reporting it.

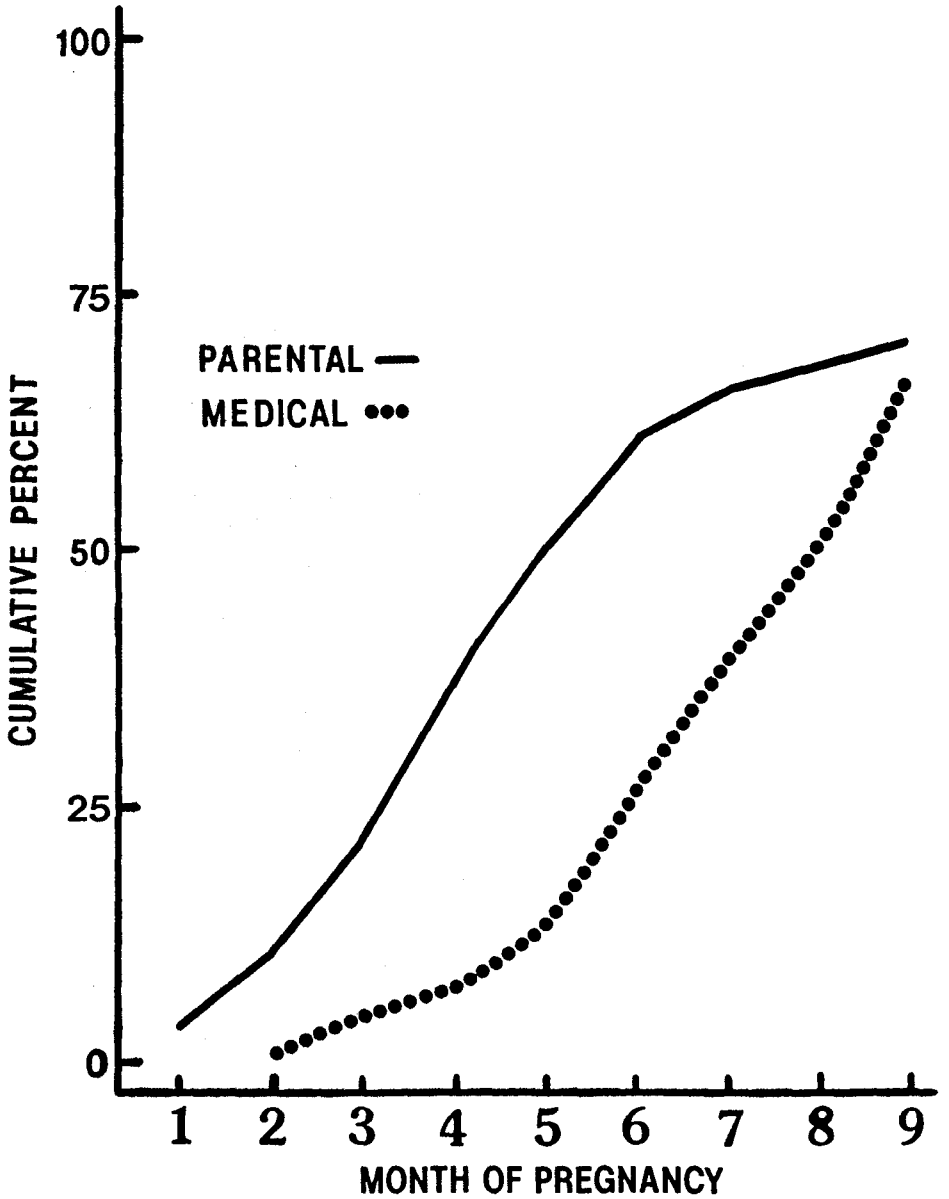

Figure. Comparison of maternal and medical diagnosis of twin pregnancy. Cumulative percent of diagnoses by month of pregnancy. N = 336.

DISCUSSION

Efforts to reduce the mortality rate in multiple births and to provide parents with time needed to make a positive psychosocial adjustment require that accurate diag-

https://doi.org/10.1017/S0001566000004116 Published online by Cambridge University Press

noses be made as early as possible in the pregnancy. It appears from our data that medical diagnoses could have been improved if the physicians had accepted the self-diagnostic statements of their patients, both multiparous and primaparous, especially with respect to weight gain and size. For example, if at the end of the sixth month, physicians had accepted their patients' belief that they were carrying multiples, they would have improved their diagnostic rate at that point in pregnancy from 94 (29%) to 207 (60%) out of 336 cases.

Self-diagnosing mothers reported that their physicians tended to dismiss their suspicions of twin pregnancy for several reasons. The early weight gain and size increase were mistakenly attributed to fluid retention, inaccurate calculation of delivery date, or excessive food intake. Mothers' reports of greater fetal movement were often attributed to an overactive fetus. The mothers' reports suggest that some physicians were inhibited in diagnosing multiples by a desire to avoid false positive diagnoses of twin pregnancy. From the present data we cannot assess the rate of occurrence of erroneous self-diagnosis of twins in single pregnancies. A study which included both single and twin pregnancies could test this reliability.

CONCLUSIONS

These data demonstrate that women's reports of suspicion of twin pregnancy may be accurate as early as the first month and that primiparous and multiparous women are equally able to recognize twins. They also demonstrate that doctors who discount or misconstrue these suspicions may serious delay or miss the clinical diagnosis altogether. Although sonography has improved twin detection to 90% when used routinely by the end of the fifth month [12], it is not yet routinely available nor employed as an early screening tool. While the diagnosis of twin pregnancy would be improved by serious consideration of patients' self-diagnostic statements, this study indicates that they occurred in just 71.1% cases. Thus, while follow up of maternal suspicions of twins would improve early medical diagnosis, it could not bring diagnosis up to 100%. For maximum positive outcome, a battery of screening devices, which would include patients' self-reports and self-assessments, should be developed, to enhance detection of twins in the critical early months.

Acknowledgments. This study was supported in part by grants from the California Department of Health Services, Maternal and Child Health Branch, and the Morris Stulsaft Foundation. The authors wish to express gratitude for the assistance of Katherine Phegan in developing the survey design and questionnaire, and the participation of the Parents of Multiple Birth Association of Canada and National Organization of Mothers of Twins Clubs of the U.S.

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