

Delivery and immigration: the experience of a Greek Hospital

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Summary

Introduction: In this retrospective study we investigate the differences regarding the mode of delivery between Greek and immigrant women.

Material and Methods: We collected data from the Birth Registry of the hospital delivery room for the period from March 1, 2000 to February 29, 2004. We assigned the women into two groups according to their nationality: Greeks and immigrants. We studied the following parameters: age, nationality, parity of women, mode of delivery instrumental delivery (ID), vaginal birth (VD), cesarean section (CS), the indications of CS, and gender and weight of the newborn; 3,071 women met the inclusion criteria.

Results: The average immigrant's age was 2.9 years lower than in the Greek group; 35.2% of the women were Greeks and 64.7% were immigrants. A significant difference was found in the percentage of multipara and the indications for CS – especially prolonged labor (significantly higher in the immigrants), and preeclampsia (significantly higher in the Greeks). There were no significant differences between the two groups referring to the rate of CS, ID or VD, the gender of the newborn, and the birth weight.

Discussion/Conclusion: We did not find any significant differences between the two groups regarding the rate of caesarean delivery. In exploring health-related differences between population groups, it is important to determine how race/ethnicity contributes to these differences. A statistically significant association between race or ethnicity and an undesirable health outcome does not by itself establish causality. Health outcomes usually have multiple causes that can be either direct or indirect and are often interrelated and interactive. Race/ethnicity and social class influence health through complex pathways.

Key words: Cesarean section; Immigration.

Introduction

The political and economic changes in Eastern Europe during the 1990s developed a massive immigration wave towards the European Community countries that was added to the immigration flow from Asian countries. This massive immigration flow in recent years has resulted in significant changes in the demographic structure of economically advanced European countries. Demographic problems are not a recent phenomenon and appear not only in Greece but also in many other European countries. It is worth noting that this period is characterized by a decrease in births as well as by a continuous and massive immigration flow. Referring in particular to Greece, the last 14 years has produced a high rate of immigrants coming not only from neighboring countries but also from Asian and African countries. Such flow resulted inevitably to an increase in pregnant immigrants in Greek public maternity hospitals, with the vast majority originating from Albania. Immigrant populations, especially undocumented, face difficulties in accessing healthcare services, including language and cultural barriers [1]. Due to that fact, the percentage of immigrant women beginning prenatal care in the third trimester or going without prenatal care is extremely high. In our maternity hospital during the 1990's pregnant immigrant women grew in numbers, with Greek women becoming the minority of our obstetric population. This trend has been constant and keeps increasing. The aim of this ret-

rospective study was to investigate differences regarding the mode of delivery in our department between Greek and immigrant women.

Material and Methods

In this retrospective study we collected data from the Birth Registry of the hospital delivery room in our Obstetrics Department at the General Hospital "Tzaneio" of Piraeus. The study period was from 01/03/2000 to 29/02/2004. We assigned all pregnant women to two groups according to their nationality: Greeks and immigrants. Only singleton pregnancies were considered.

Analysis was conducted on the following outcomes: age, nationality, parity of women, mode of delivery – instrumental delivery (ID), vaginal birth (VD), cesarean section (CS) – the indications of CS, gender and weight of the newborn; 3,071 women met the inclusion criteria during the study period. Of these 1,081 (35.2%) were Greek and 1,990 (64.7%) were immigrants.

Statistical analysis was performed with the t-test and chi-square test, wherever applied.

Results

The average immigrant's age was 2.9 years lower than the Greek group, an anticipated result since the majority of immigrants are young in age (Table 1). Of the women 1,081 (35.2%) were Greeks and 1,990 (64.7%) were immigrants.

A significant difference was found in the percentage of multipara (para 3 or more, significantly higher among

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Greek women $p < 0.01$) (Table 1). There were no significant differences between the two groups referring to the rate of CS, instrumental delivery, or vaginal birth (Table 1). Significant differences found concerned the indications for cesarean section, and especially prolonged labor (significantly higher in the immigrant group, $p < 0.01$), and preeclampsia (significantly higher in the Greek group, $p < 0.05$) (Table 2). There were also no significant differences between the two groups regarding gender of the newborn and birth weight (Table 1).

Table 1. — Analysis of age, parity, mode of delivery, infant's gender and birthweight in the two groups (Greeks and immigrants).

Variable	Greeks (n = 1,081)	Immigrants (n = 1,990)	
Age	29.02 years	26.04 years	
Parity			
nullipara	35.98%	46.83%	ns
para 1,2	50.14%	49.29%	ns
multipara	13.88%	3.88%	< 0.01
Vaginal birth	63.83%	69.10%	ns
Assisted delivery	2.22%	2.21%	ns
Cesarean section	33.95%	28.69%	ns
Gender			
male	58.74%	55.73%	ns
female	41.26%	44.23%	ns
Birth weight (average)	3160.06 g (+ 266.4)	3550.95 g (+ 342.8)	ns
Birth weight			
< 2500 g	10.08%	10.30%	
2501-2999 g	14.89%	12.68%	
3000-3499 g	60.96%	53.06%	
3500-3999 g	10.74%	20.14%	
> 4000 g	3.33%	3.82%	

ns = non significant.

Table 2. — Main indications for CS in the two groups (Greeks and immigrants).

Indications	Greeks	Immigrants
Previous cesarean section	98 (26.70%)	132 (23.12%)
Disproportion	44 (11.99%)	59 (10.33%)
Non reassuring FHR	69 (18.80%)	78 (13.66%)
Prolonged labor	16 (4.36%)	50 (8.76%)
Breech presentation	21 (5.73%)	30 (5.25%)
Other	119 (32.42%)	222 (38.88%)
Total	367 (100%)	571 (100%)

FHR = fetal heart rate; ns = non significant.

Discussion

The number of immigrants (legal or illegal) has been growing in our country over the last 15 years. The vast majority come from neighboring countries, especially Albania. While during the first years illegal immigrants were the majority, in the last five years they have become the minority due to changes in the immigration policy of the Greek government. Despite that, immigrant attendees usually do not have any medical history, making the physician's duty difficult in determining the level of medical interventions needed for their current medical conditions. Competent cultural training and proper trans-

lation and interpretation are crucial factors to deliver high quality healthcare services to these people. Unfortunately, in our country there is not any systematic effort to provide these kinds of services, and the physician needs to rely on family members with more adequate levels of linguistic skills to get the information needed. This leads not only to false interpretations of symptoms, but also to losing potentially valuable information from the patient's history due to the patient's reluctance to reveal such information e.g., in the presence of a husband.

In recent years cesarean delivery has become the most frequently performed major operative procedure for women in childbearing age. The incidence of pregnancies that end in caesarean section is rising throughout the industrialized world, although there are considerable variations in rates and practices between countries, geographical areas and hospitals [2]. Over the past ten years many studies have monitored this "epidemic" [3]. All of them conclude that the maternal and the fetus risk do not justify the incidence of cesarean sections.

We did not find any significant differences between the two groups regarding the rate of cesarean deliveries. It is worth noting though that immigrant women were delivered significantly more frequently than Greek women by cesarean section due to "prolonged labor" ($p < 0.01$), an indication influenced many times by non-clinical determinants. The non-clinical determinants that usually influence the decision to perform a cesarean section include the woman's socioeconomic status [4], the hospital practice style, [5] whether or not it is a teaching hospital, [6] and the election of defensive medical practices under the threat of legal action [7]. Racial and ethnic differences in the likelihood of cesarean section have been reported in the USA [8] and in Norway [9]. In Italy differences in cesarean section rates between natives and immigrants are limited to elective cesarean section only [10]. Another significant difference ($p < 0.05$) was that Greek parturients were more likely to give birth by caesarean section due to hypertensive disorders of pregnancy. This can partly be explained by the age difference between the two groups, especially in the subgroup of women ≥ 35 years old (Greeks 14.8%, immigrants 4.42%). Age distribution differences and economic factors between the two groups seem to be the reasons for the significant difference in multipara women (Greek women were more likely to be multipara, $p < 0.01$).

In exploring health-related differences between population groups it is important to determine how race/ethnicity contributes to these differences. A statistically significant association between race or ethnicity and an undesirable health outcome does not by itself establish causality. Health outcomes usually have multiple causes that can be either direct or indirect and are often interrelated and interactive. Race/ethnicity and social class influence health through complex pathways. The distinction between risk factor and risk marker highlights the complex interplay of socially defined race/ethnicity, racism, discrimination, socio-economic status, social class, and genetics [11].

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