

The Birth of Spontaneously Conceived Quintuplets: Case Report

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ABSTRACT

Background: The birth of quintuplets is rarely reported in the world. Assisted reproductive technologies have contributed significantly to the increase in the incidence of multiple pregnancies. In multiple pregnancy, the risk of perinatal morbidity and mortality is high and often linked to prematurity. **Case Report:** A 28-year-old woman, gravida 1 para 0, referred to Pyongyang Maternity Hospital on the diagnosis of multiple pregnancy with 3 or more babies at 30 weeks and 5 days of gestation. At admission, she was diagnosed as gestational hypertension, obesity, and multiple pregnancy. The live quintuplets were born by Cesarean Section at 32 weeks of gestation. All the quintuplets survived through the intensive care and recovery for 140 days and were discharged in good health. **Conclusions:** The early diagnosis of multiple pregnancy and regular checkup according to the high-risk pregnant women care system are effective.

Keywords: Quintuplets, Multiple Pregnancy, Assisted Reproductive Technologies, Perinatal Morbidity And Mortality

Article Information

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INTRODUCTION

The birth of quintuplets is rarely reported in the world. Assisted reproductive technologies have contributed significantly to the increase in the incidence of multiple pregnancies. In multiple pregnancy, the risk of perinatal morbidity and mortality is high and often linked to prematurity [1,3]. The more fetuses, the higher perinatal morbidity and mortality [2].

Higher order multifetal gestation such as quintuplet pregnancy is very rare, rarer if they occur without fertility treatment. Hellin's law states that the natural incidence of twins would be 1 in 89 live births, triplets 1 in 7 921 live births, quadruplets 1 in 704 969 live births and quintuplets 1 in 62 742 241 live births and so on [4]. Thus, the spontaneously conceived quintuplets pregnancy is very rare, and

moreover, that quintuplets are all survived is also rare.

CASE REPORT

A 28-year-old woman, gravida 1 para 0, referred to Pyongyang Maternity Hospital on the diagnosis of multiple pregnancy with 3 or more babies at 30 weeks and 5 days of gestation on January 22, 2025. She was married at the age of 26 and has no history of abortion. She is in blood group AB, 158cm in height and 89kg in body weight (BMI=35.6).

Pre-pregnancy menstrual cycle was 28 days and regular. The first day of the last menstrual period was June/22/ 2024, therefore, the expected confinement day was March/29/2025 by Naegele's formula. Her blood pressure was 140/100mmHg, pulse rate 120bpm, respiratory

rate 32 per minute and body temperature 36.5°C.

At admission she was diagnosed as gestational hypertension, obesity and multiple pregnancy. We tried to maintain the pregnancy with tocolytics and augmented fetal lung maturation.

On January 31, the quintuplets were born by Cesarean section at 32 weeks and 0 day of gestation. After delivery Bakri balloon was inserted from atonic uterine bleeding, and 2 units of packed red blood cell were transfused. The quintuplets were admitted to NICU for preterm neonate resuscitation. **Table 1** shows the data of quintuplets at birth.

The blood group of quintuplets are different and the birthweight was the heaviest in the second baby (1 580g) and the smallest in the fifth baby (1 110g) (**Table 1**).

All the quintuplets survived through the intensive and recovery care for 140 days and discharged in good health.

The well-being status of quintuplets at discharge was showed in **Table 2**.

The body weights of all the quintuplets reached over 4kg. **Photo 1** shows the quintuplets before discharge.

Table 1. Data of quintuplets.

Order	Sex	Blood Group	Apgar score		Birth weight (g)	Height (cm)	Head circumference (cm)	Chest circumference (cm)
			1 min	5 min				
1	Female	B	6	7	1 280	36	27	22
2	Male	AB	4	7	1 580	40.5	29	25
3	Female	AB	5	6	1 290	37	27.5	23
4	Male	B	6	7	1 420	38	28	23
5	Female	A	5	7	1 110	35	25.5	22

Table 2. The well-being status of quintuplets at discharge.

Order	Body weight(g)	Height (cm)	Head circumference (cm)	Chest circumference (cm)	Abdominal circumference (cm)
1	5 380	58	37	39	41
2	5 960	61	38.5	43	40
3	5 480	58	37	40	41
4	6 480	61	38.5	41.5	41.5
5	4 740	57	36	37	37



Photo 1. Quintuplets born from a spontaneous pregnancy. *(The birth order from the left. Yellow clothing is Female and blue one is Male.)*

DISCUSSION

The birth of quintuplets is said to be a natural wonder, especially when it happens without any assisted reproductive technologies [6]. It is further a marvel that all the babies have survived and are doing well, because quintuplet pregnancies are associated with high rates of obstetric complications and significant perinatal morbidity and mortality [5, 6]. The early diagnosis of multiple pregnancy and regular checkup according to the high-risk pregnant women care system are effective [5].

In the Democratic People's Republic of Korea, women who have been diagnosed as a multiple pregnancy of 3 or more babies are rushed to the Pyongyang Maternity Hospital to receive the proper medical service. Their newborn babies come under the special care of doctors until the babies weigh 4 kg. And the babies are brought up at the state-run baby homes until they are 4 years old as required by their parents. The regular care system for multiple pregnancy is an essential factor to improve the health of multiple pregnant women and to decrease the perinatal morbidity and mortality.

CONCLUSIONS

The early diagnosis of multiple pregnancy and regular checkup according to the high-risk pregnant women care system are effective. The regular care system for multiple pregnancy is an essential factor to improve the health of multiple pregnant women and to decrease the perinatal morbidity and mortality.

Declaration of competing interest

The authors declare that they have no conflict of interest.

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