

## Kharadar spontaneous quintuplets reached their adolescence life:

### A case report

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#### Abstract

Quintuplet pregnancies are associated with significant perinatal morbidity and mortality. The spontaneous quintuplets are a rare occurrence, and the survival is extremely rare. The first quintuplets known to survive infancy to adulthood were the Dionne Quintuplets, born in 1934. Kharadar quintuplets born in 2006, in Karachi Pakistan, were the first set of quintuplets who were born alive and reached their adolescence.

A 30-year old women, presented at Kharadar General Hospital (KGH) during the 28th week of gestation for pregnancy evaluation. She was diagnosed with a quintuplet pregnancy with no gross foetal abnormality on ultrasound abdomen. The patient had premature rupture of membrane at 30th week of gestation, and emergency caesarean section was performed. All five quints were born alive, had normal APGAR scores, were premature, and had low birth weight. After birth, all quints were immediately shifted to the neonatal intensive care unit. After a 10 day hospital stay, all quints were discharged. In 2023, all quints celebrated their 17th Birthday.

**Keywords:** Quintuplets, Spontaneous pregnancy, Adolescence, Quintuplets survival.

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#### Introduction

Quintuplets are a set of five babies born in one birth. A baby that is part of such a set is called a quintuplet or referred to as a "quint". Quintuplet pregnancies are associated with high rates of obstetric complications and significant perinatal morbidity and mortality. Nearly all quintuplet pregnancies are preterm, with the mean gestational age at delivery being 28.9 weeks,<sup>1</sup> resulting in Caesarean section and low birth weight delivery. Most quintuplets receive medical care in a hospital neonatal

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intensive care unit (NICU) until they reach their original, full-term birth date.<sup>2</sup> The perinatal mortality rate was 253/1,000 live births.<sup>1</sup> Minor and major neonatal morbidity affects 20% and 10% of quintuplet neonates, respectively.

The spontaneous conception of quintuplets is rare, with the average estimate being 1 in over 60 million births.<sup>3</sup> The survival of quintuplets is extremely rare. The first quintuplets known to survive infancy to adulthood were the identical female Canadian Dionne Quintuplets, born in 1934.<sup>4</sup> The first set of quintuplets born in Pakistan was Kharadar Quintuplets, born at Kharadar General Hospital (KGH), Karachi, Pakistan on 4th October 2006. There were 3 boys and 2 girls. Boys and girls were identical within the same gender. The live births of all five quints were reported in national newspapers at that time.<sup>5</sup> The birth of Kharadar quintuplets was followed by subsequent quintuplets births reported from Pakistan in 2008<sup>6</sup> and 2015.<sup>7</sup>

There is a dearth of data reporting the survival outcome of quintuplets, especially from developing countries. To our knowledge, few cases of spontaneous quintuplet pregnancy have been reported worldwide, who survived from their infancy to adolescent life. The current Kharadar quintuplets are the first ever case of spontaneous quintuplet to be reported from Pakistan, who were born alive and reached adolescence.

#### Case Report

A 30 year old, lower-middle-class woman, having Gravida 2, Para 1 (one daughter alive), un-booked, presented in her third trimester at the gestational age of 28 weeks, for pregnancy evaluation, at Kharadar General Hospital, Karachi, Pakistan on 18th September 2006. She had an ultrasound abdomen report, taken at a private hospital at 12 weeks of gestation, which identified multiple pregnancy. Due to the lack of antenatal care history, and the presence of multiple pregnancy, she was immediately admitted to the hospital for pregnancy evaluation, monitoring and safe delivery. On examination, she looked exhausted due to her large pendulous abdomen. Her ultrasound abdomen was repeated at KGH, confirming the quintuplets with key foetus having footling presentation. Foetal heart activities were present, the amniotic fluid was normal in amount and no gross foetal abnormality was noted.



**Figure-1:** First set of quintuplets born on 4th October 2006 in Pakistan at Kharadar General Hospital, Karachi, Pakistan.

Her husband was counselled about the anticipated complication of multiple pregnancy, including preterm labour, prematurity, antepartum haemorrhage, premature rupture of membrane (PROM), postpartum haemorrhage, foetal growth retardation, and the possibility of a Caesarean section as a mode of delivery. The couple gave consent for a Caesarean section. Appropriate preparations were made for safe delivery. These included five sets of incubators, availability of obstetrician, anaesthetist, paediatrician, operation theatre staff and neonatal intensive care unit (NICU) staff to ensure uneventful surgery.

While she was admitted to the hospital during the 30th week of her gestation, she had PROM (premature rupture of membranes). Therefore, an emergency caesarean section was performed immediately on 4th October 2006. All five babies were born alive within the span of six minutes. At birth, all five babies were premature, had normal APGAR score ( $\geq 7$ ) at 1 and 5 minutes and all babies had low birth weight, having an average body weight of 1.5 kg (ranging from 1.3 to 1.6 kg) and the total weight was 7.3 Kg (16 lb). All quints were immediately shifted to the NICU due to prematurity, for further monitoring and management (Figure 1). There were no intrapartum and postpartum complications. After 10 days of stay, all quints along with their mother were discharged from the Hospital. Informed consent was taken from the father of quintuplets for participation in the study and using the data and images for publication. The current case report was reviewed and approved by the chief executive officer of Kharadar General Hospital, Karachi.

## Discussion

Kharadar quintuplets were invited to celebrate their 17th birthday on 4th October 2023 at KGH as a regular annual event. They were the first set of quintuplets in Pakistan, to be born alive, discharged alive from the hospital and



**Figure-2:** Kharadar Quintuplets turns into 17 years on 4th Oct 2023).

survive till their adolescent age. Currently, all quints are healthy, having an average body weight of 45 Kg (ranging from 35 to 55 kg), school-going (secondary level schooling), and leading active adolescent lives. The father of the quintuplets, a carpenter from a low socioeconomic class has raised the quintuplets along with 2 other siblings. Quintuplet's mother was a housewife and had hepatitis C virus (HCV) positive at the time of Quintuplet's birth. To rule out the vertical transmission in quints, hepatitis C screening was performed through laboratory ELISA method and all quints were found to be HCV negative. Kharadar General Hospital has supported all the health expenses of these quints from the time of their birth till today and has also provided some educational support, such as free provision of Books and computers. (Figure 2).

After the birth of Kharadar quintuplets in 2006, two more quintuplet cases were reported from Pakistan. One spontaneous quintuplet was born alive to a woman without fertility treatment in 2008 in Quetta<sup>6</sup> and another quintuplet birth, resulting from ovulation induction treatment, was reported in 2015 from Ziauddin University Hospital, Karachi. Of 5 quints, one quint was an intrauterine death (IUD) and another quint died on the second day of birth, leaving three babies who survived.<sup>7</sup>

The survival of spontaneous quintuplets is rare and survival till childhood is even rarer. Limited data are available about the quintuplet's survival from birth to adolescence. Dionne quintuplets, five identical girls, the most famous set of quintuplets born on May 28, 1934, in Ontario, Canada, were the first quintuplets, known to have survived their infancy to adulthood. To date, three of them died at the age of 20 (Emillie 1954), 35 (Marie 1970) and 67 (Yvonne 2001) years. Two are still alive (Annette & Cecile) at the age of 89 years.<sup>4</sup> Merry Ann Fischer Quintuplets, the first set of surviving quintuplets born in the U.S. on Sep 14, 1963, comprised of one boy and four girls.<sup>8</sup> In 2013, they celebrated their 50th birthday.<sup>9</sup> Helms Quintuplets, another surviving quintuplet

from the U.S. born On March 2, 1987 turned 30 years old in 2017.<sup>10</sup> The Cassidy quintuplets, from Ireland were born in the Rotunda hospital, Dublin on the 16th of August, 2001. They celebrated their 18th birthday in 2019 at Rotunda Hospital with the staff that spent several months caring for them in 2001.<sup>11</sup>

Quintuplet pregnancies are associated with high rates of perinatal complications and significant morbidity and mortality.<sup>1</sup> The survival of the Kharadar quintuplets was the result of a joint effort of a multi-disciplinary team consisting of Obstetricians, Anaesthesiologist, Paediatricians, Operation theatre and NICU staff, utilizing advanced equipment for the resuscitation of both mother and babies to ensure a safe outcome.

### Conclusion

Kharadar quintuplets were the first set of Pakistan quintuplets to have been spontaneously conceived. They were born alive, discharged alive from the hospital and survived. They reached their 17th birthday on 4th October, 2023.

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**Conflict of Interest:** None to declare.

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### Author Contribution:

MA: Literature search, conceived idea, identify uniqueness, interviewed all quintuplets for evaluation of past and present physical status and writing.

KI: Supervision, consultant order, clinical follow-up, and patient care after discharge.

HB: Revision, validated the history and physical examination.

SSAR: Final approval and validated the NICU events.

RH: Literature review and revise case presentation.

SW: Patient care during stay in NICU and after discharge, quintuplets birth time data retrieval, coordinated with quintuplets and hospital administration for hospital visits.

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