Letter to the Editor
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A Report of the Birth and Death of 4 Infants Affected by Crigler Najjar Disease in an Afghan Migrant Family in Iran

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Dear Editor,

We would like to report a case involving a poor Afghan family that lacked access to proper medical services. This family has experienced multiple instances of Crigler Najjar disease in their newborn babies. The woman, originally from Afghanistan, has been pregnant a total of eight times. Out of these pregnancies, four children were born alive, with one currently being three months old and experiencing jaundice. Unfortunately, three other children died before reaching three months of age.

During the eighth pregnancy, the gynecologist took a thorough medical history and requested genetic testing for both the wife and husband. The results revealed that the woman had four gene mutations and was heterozygous, while the man had one mutation and was also heterozygous. The gene that was heterozygous in both individuals is known to cause Crigler Najjar disease.The last surviving child had a high probability of suffering from Crigler Najjar syndrome, which was confirmed during fetal sampling. However, due to legal restrictions on abortion, the medical doctor was unable to proceed with terminating the pregnancy.

This case highlights the plight of an Afghan family where multiple pregnancies resulted in the death of children due to Crigler Najjar disease. The doctors involved did not initially investigate the cause of these deaths until the eighth pregnancy, when the obstetrician discovered the genetic mutation. Unfortunately, legal restrictions prevented the termination of the pregnancy. It is worth noting that both the woman and man are asymptomatic carriers of the gene mutation.

The woman had a total of nine pregnancies, resulting in five children (four healthy and one with Crigler Najjar). Three children died within the first week of birth due to severe jaundice, all passing away by three months of age. Additionally, there was one spontaneous abortion at 16 weeks. The woman, aged 26, is a housewife with no significant medical history or hospitalizations. Her physical examination was normal. The man, aged 35, is a furniture seller with no history of illness or hospitalizations.

The couple hails from Nimroz province in Afghanistan but currently resides in Iran. They are the second child in their respective families and have no known history of genetic diseases or spontaneous abortions in their families. Throughout all pregnancies, there was no exposure to radiation or specific medications, and all deliveries were natural vaginal births. The deaths of the children occurred suddenly at home. They were taken to the hospital with bilirubin levels of 18 and received phototherapy treatment. However, they were discharged with bilirubin levels of 11, only to become jaundiced again and eventually pass away. No further investigations were conducted on these infants.

The last surviving child is currently four months old. He has outlived his deceased siblings and has undergone a phototherapy treatment plan since birth. His bilirubin levels have gradually decreased from 16 to 13 and now 10. However, he still exhibits jaundice during examinations and occasionally experiences grunting while breathing (Fig. 1). Birth indices for this child were as follows: weight - 3300 grams, height - 50 cm, head circumference - 34 cm. Current indices at four months old are as follows: weight - 5960 grams, height - 63.5 cm, head circumference - 40.5 cm. The growth indices have remained within the normal range (SD0 to SD1+).

The woman's pregnancies progressed normally, although she consistently experienced iron deficiency anemia. She received adequate healthcare and immunizations throughout her pregnancies and was seen by both a gynecologist and healthcare provider for each pregnancy. Despite recommendations for genetic screening in each pregnancy, the woman consistently declined. However, she was always asked about any family history of genetic diseases, which she failed to mention. Both the man and woman do not smoke or use drugs. Their dental health is good without any oral hygiene issues. The only medication used during the pregnancies was iron and vitamin D tablets.

As a result, based on the information provided, we recommend that healthcare professionals and caregivers take the medical history of pregnant women, especially their previous childbirth history, seriously. If access to screening tests is available, suspicious cases of genetic disorders should be tested. The deaths of three infants in this family highlight the importance of improving maternal healthcare in Afghanistan.

Conflict of Interests

The author have no conflict of interests to declare.

Fig. 1 **The 4-month-old child with jaundice presentation.**

Acknowledgment

The authors of the present study sincerely thank all of the medical staff and the dear patient who cooperated with us for the completion of this study.

Ethics Approval

Our institution does not require ethical approval for reporting individual cases or case series. All of the authors declare that confidentiality of the patient was respected.

Consent for Publication

Written informed consent was obtained from a legally authorized representative(s) for anonymized patient information to be published in this article.

Data Availability Statement

The data that support the findings of this study are available on request from the corresponding author.

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Author Contribution

AG was the principal investigator of the study. AG were included in preparing the concept and design. AG revisited the manuscript and critically evaluated the intellectual contents. AG participated in preparing the final draft of the manuscript, revised the manuscript, and critically evaluated the intellectual contents. AG have read and approved the manuscript's content and confirmed the accuracy or integrity of any part of the work.