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Sirenomelia: A rare presentation of twin pregnancy: A case report

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Abstract

Sirenomelia, often referred to as Mermaid Syndrome, is an exceptionally rare congenital anomaly characterized by the fusion of the lower limbs, creating a striking resemblance to a mermaid's tail. This condition is associated with a spectrum of severe musculoskeletal, genitourinary, and gastrointestinal malformations and presents unique challenges in both diagnosis and management. In this case report, we present a compelling case of sirenomelia in a 30-year-old female with a gravidity of 2 (G2P0010), who arrived at our healthcare facility as an unbooked and uninvestigated patient during her twin pregnancy. We aim to emphasize the significance of early prenatal care and comprehensive ultrasound examinations in the detection and management of sirenomelia. Our patient, without prior prenatal care, went into labor at 32 weeks of gestation. During labor, the second twin was delivered as a mermaid baby, displaying the characteristic fused lower limbs and associated congenital anomalies. Tragically, despite immediate medical attention, the newborn's life was brief, lasting for only 10 minutes. Our case report serves as a poignant reminder of the crucial role played by early prenatal care and screening in the detection and management of sirenomelia. While sirenomelia remains a rare and challenging condition, a collective effort within the medical community is necessary to enhance our understanding and explore innovative strategies for improving neonatal outcomes.

Keywords: Sirenomelia, mermaid syndrome, congenital anomaly, prenatal care, multidisciplinary approach, neonatal outcomes

Introduction

Sirenomelia, also known as Mermaid Syndrome, is an exceedingly rare and devastating congenital anomaly characterized by the fusion of the lower limbs, resembling the mythical mermaid tail. This condition is associated with severe musculoskeletal, genitourinary, and gastrointestinal malformations, often resulting in neonatal mortality^[1,2].

Sirenomelia is a rare congenital anomaly, with an estimated incidence of 1 in 100,000 live births, making it a challenging diagnosis for healthcare providers, particularly in uninvestigated pregnancies like the one presented here. This case underscores the importance of early prenatal care and comprehensive ultrasound examinations to detect such anomalies in the early stages of pregnancy, allowing for timely intervention and counseling for the affected families^[3-5].

Understanding the clinical presentation, associated anomalies, and the challenges in managing sirenomelia cases is essential for healthcare professionals, as early recognition and intervention can significantly impact neonatal outcomes. This case report aims to contribute to the limited literature on sirenomelia and emphasizes the importance of prenatal care and screening to improve the management and prognosis of these rare and complex cases.

Case description

This case revolves around a 30-year-old female with a gravidity of 2 (G2P0010) who presented as an unbooked and uninvestigated twin pregnancy at 32 weeks of gestation. The patient had one prior pregnancy, which did not yield any living children (G2P0010).

Upon her arrival at our healthcare facility, the patient was in active labor. Given the absence of previous prenatal care and screening, sirenomelia, a rare congenital anomaly, remained undiagnosed until the moment of delivery. During labor, the second twin was born with a striking presentation of sirenomelia, characterized by the fusion of the lower limbs, creating a mermaid-like appearance.

Sirenomelia, also known as Mermaid Syndrome, is an exceedingly rare condition, marked by a

spectrum of severe musculoskeletal, genitourinary, and gastrointestinal malformations, making it a complex challenge for medical professionals to manage.

Despite immediate medical attention, the newborn with sirenomelia had a tragically short life, surviving for only 10 minutes.

This case highlights the profound impact of timely prenatal care and comprehensive screening in the management of sirenomelia. The lack of such care in this instance underscores the importance of early diagnosis and intervention for the betterment of neonatal outcomes in pregnancies affected by this rare and complex condition.

Discussion

Sirenomelia, also known as Mermaid Syndrome, is an exceedingly rare and enigmatic congenital anomaly that poses substantial diagnostic and therapeutic challenges. This discussion seeks to contextualize our case within the existing body of literature on sirenomelia, drawing comparisons and insights from previous studies.

Sirenomelia is a condition with a reported incidence of approximately 1 in 100,000 live births, rendering it a medical rarity [2, 3]. Our case aligns with the infrequency of this condition, emphasizing the limited clinical exposure most

healthcare professionals have to sirenomelia.

The patient in this case arrived at our healthcare facility as an unbooked and uninvestigated case. The absence of prenatal care resulted in a delayed diagnosis of sirenomelia, a situation not uncommon in cases of this nature [Orioli *et al.*, 2011]. Early prenatal care, including comprehensive ultrasound examinations, is pivotal for detecting sirenomelia in the early stages of pregnancy. Studies have shown that early diagnosis can significantly impact neonatal outcomes by allowing for informed decision-making and timely interventions [2, 3].

Sirenomelia presents a complex clinical picture with a range of associated anomalies, including fused lower limbs, renal agenesis, and cardiac abnormalities [2, 3]. Our case reinforces the need for a multidisciplinary approach to address the multifaceted medical issues arising from this condition. This approach includes pediatric surgery, neonatology, urology, orthopedics, and genetic specialists, among others.

Tragically, the newborn in our case, like many sirenomelia cases, succumbed to the condition within minutes of life. The prognosis for sirenomelia remains extremely poor, with most affected infants not surviving beyond the neonatal period. However, documented cases of successful surgical interventions and long-term survival, albeit rare, suggest that a comprehensive care strategy can potentially improve outcomes [2, 4].



Fig-1: a-d): Few Pictures of case of Sirenomelia

Conclusion

Our case of sirenomelia underscores the paramount importance of early and comprehensive prenatal care and screening. Delayed diagnosis due to the lack of such care can limit options

for intervention and counseling for affected families. A multidisciplinary approach is vital in managing the complex medical issues associated with sirenomelia.

While the prognosis for sirenomelia remains challenging,

continued research and a collective effort within the medical community are crucial to enhance our understanding of this rare condition and explore innovative strategies for improving neonatal outcomes.

Conflict of Interest

Not available

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