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POTTER SYNDROME IN BRAZIL: A CROSS-SECTIONAL ANALYSIS, 2011-2021

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Introduction:
Potter Syndrome (PS) is a congenital disorder in which the function of an infant's kidneys is affected. First described by Edith Potter in 1946, classic PS is characterized by bilateral renal agenesis associated with oligohydramnio; this causes distinct facial and skeletal abnormalities and pulmonary hypoplasia, the latter of which is often fatal after birth. PS can also be caused by polycystic kidney disease, urinary obstruction and premature membrane rupture. It can involve autosomal dominant and recessive factors and has been observed to be more prevalent in males than females.

Methods:
This is a cross-sectional and documentary study with a quantitative approach; data from 2011 to 2021 was obtained from the SINASC section of DATASUS (public health system data set from Brazil). The variables assessed included race, length of pregnancy, type of pregnancy (single or multiple) and Apgar score in the first minute of life.

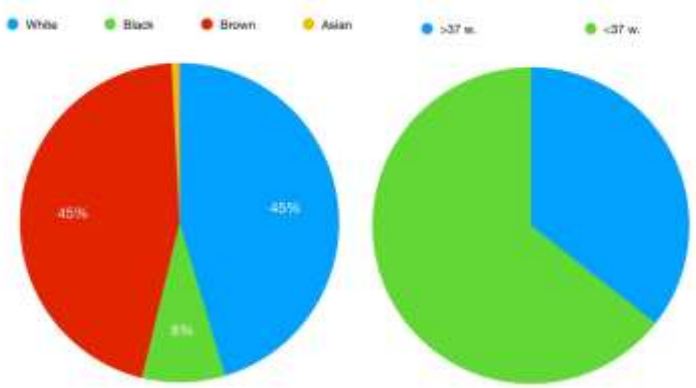
Results:

Race among babies diagnosed with Potter Syndrome in Brazil:

- Asian: 0,2% (1)
- Black: 8% (37)
- Brown: 45% (196)
- White: 45% (196)

Length of pregnancy:

- <22 weeks: 0,2% (1)
- >41 weeks: 0,6% (3)
- 22-27 weeks: 2% (11)
- 28-31 weeks: 11% (49)
- 37-41 weeks: 35% (156)
- 32-36 weeks: 50% (224)

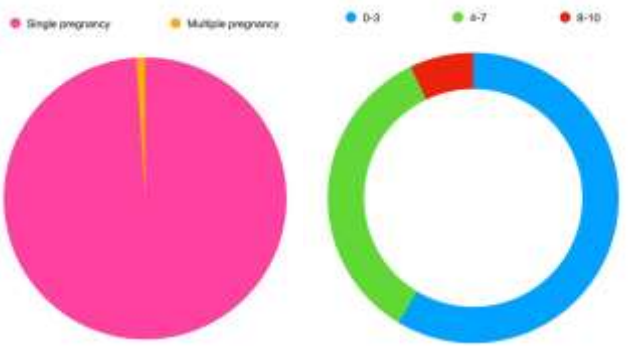


Type of pregnancy:

- Single pregnancy: 98% (448)
- Multiple pregnancy (twins or more): 1% (6)

Apgar score in the 1st minute of life:

- 0-3: 58% (257)
- 4-7: 34% (152)
- 8-10: 7% (34)



Conclusions:

The study revealed that Potter Syndrome remains a rare condition, affecting a relatively small number of infants. It is essential to note that Potter Syndrome has a significant impact on neonatal health, as indicated by the high proportion of newborns with low Apgar scores in the first minute of life, which is associated with increased morbidity and mortality. The distribution of cases across different racial groups suggests that Potter Syndrome affects individuals of various ethnic backgrounds, highlighting the importance of comprehensive healthcare and awareness regardless of race or ethnicity.

Additionally, the study showed variations in the length of pregnancy, with a substantial number of preterm births, emphasizing the need for early detection and management of Potter Syndrome to improve outcomes. Furthermore, the majority of cases involved single pregnancies, which aligns with existing knowledge about the condition. This underscores the importance of prenatal care and monitoring, especially in singleton pregnancies, to identify and manage risk factors associated with Potter Syndrome. This research contributes to our understanding of Potter Syndrome's epidemiology in Brazil and underscores the importance of continued efforts in research, prevention, and management of congenital disorders.