Impact of prenatal Diagnosis on Elective Termination of Pregnancy in Puerto Rican Population: A Preliminary Report

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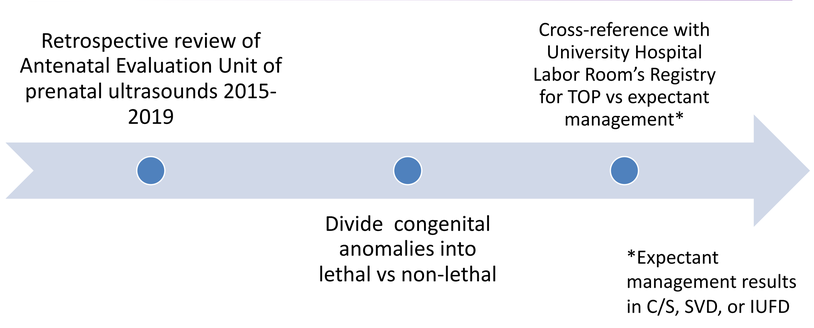
ABSTRACT

Prenatal detection of congenital anomalies provides parents with management options. In populations where termination of pregnancy (TOP) is available, prevalence of genetic syndromes and birth defects may decrease with prenatal detection. In Puerto Rico, 1/33 babies have a congenital defect; a primary cause of infant mortality. However, the frequency of elective TOP after antenatal diagnosis of anomalies in this population has not been studied. A retrospective review of prenatal ultrasounds performed between 2015 and 2019 at the University Hospital Antenatal Evaluation Unit was performed for identification of cases where a diagnosis of major congenital anomalies was done and management alternatives were offered. Information was cross-referenced with labor room registry for determination of elective TOP vs expectant management in those with lethal vs non-lethal anomalies. Results showed identification of congenital anomalies prior to 24 WGA by ultrasound resulted in 148 prenatal diagnoses of congenital anomalies from which 43% (63/148) of patients opted for TOP. When congenital anomalies were separated by prognosis, preliminary results showed that 63% chose TOP (61/97) amongst those considered lethal vs 4% (2/51) in non-lethal major anomalies. An 11% was not able to be cross-referenced on the labor room registry. In the studied population, ultrasound identification of lethal congenital anomalies prior to 24 WGA showed a high election of TOP. However, non-lethal anomalies showed a low prevalence of TOP selection casting doubts over the real impact of prenatal diagnosis in the overall perinatal mortality and morbidity.

BACKGROUND

- Fetal anatomy evaluation during pregnancy is an integral component of prenatal care, with countries developing standard protocols for detection of congenital fetal anomalies early in pregnancy.
- Studies in the USA and other countries have established the factors that influence women in choosing elective termination of pregnancy vs expectant management in cases of antenatal diagnosis of congenital anomalies. However, no studies have been made in Puerto Rico.

METHODS



RESULTS

Table 1. Lethal vs Non-lethal Congenital Anomalies Prevalence in University Hospital Antenatal Evaluation Unit from 2015-2019

Congenital Anomalies	TOP	Expectant Management	Not in Registry	Total # of cases
Non-Lethal	2	47	2	51
Lethal	61	25	11	97

Table 2. Congenital Anomalies Based on Prognosis

Lethal	Non-Lethal
Non-Immune Fetal Hydrops	Gastroschisis
Anencephaly/Acrania	Omphalocele
Bilateral Renal Agenesis	Left Hypoplastic Heart
Bilateral MCKD	Diaphragmatic Hernia
Holoprosencephaly	VSD, ASD
Skeletal Dysplasia	Cleft Lip/Palate
Lethal Aneuploidy	Open Neural Tube Defect

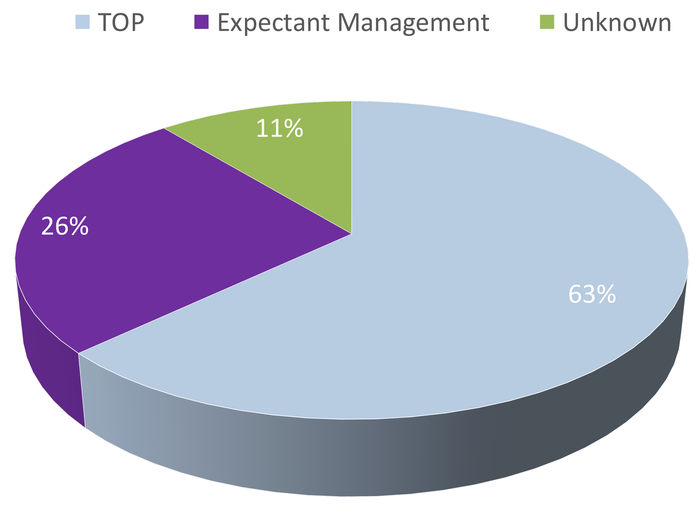


Figure 1. Management Options Chosen by Patients with Lethal Congenital Anomalies Identified in Prenatal Ultrasound

RESULTS

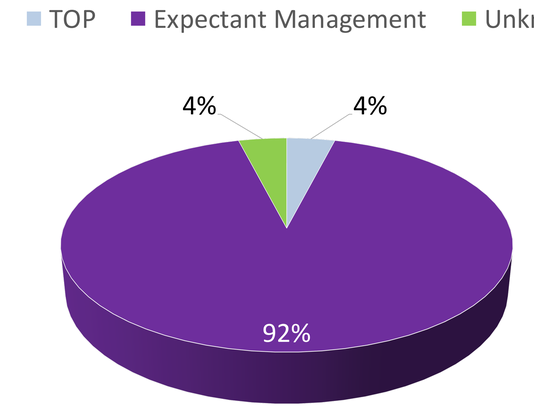


Figure 2. Management Options Chosen by Patients with Non-Lethal Congenital Anomalies Identified in Prenatal Ultrasound

CONCLUSIONS

- Evaluation of data shows that in our population 57% of patients diagnosed with a major congenital anomaly prior to 24 weeks of gestation will not choose a termination of pregnancy
- Even in cases of lethal congenital anomalies, many will not choose a TOP (26%).
- These results suggest that the impact of prenatal diagnosis in perinatal mortality and morbidity may be limited in our population
- The reasons for the low incidence of TOP in our population may be cultural or religious but are not the result of limited accessibility to prenatal diagnosis

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