Introdución

Thymus area in second trimester of pregnancy by 2D ultrasound: Normogram of Indian Fetuses

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Introduction

The fetal thymus volume/area in fetuses with congenital heart diseases is decreased. Fetal echocardiography can assess the thymus in most cases at risk for del22q11.2. We need normograms for thymic evaluation for thymic hypoplasia in Indian patients as a single value is often not diagnostic. We aimed to establish a normogram of the fetal thymus area in second trimester (18 to 28 weeks) of pregnancy by 2D ultrasound.

Methods

• Prospective and cross sectional study.
• Period - January 2017 to September 2017.
• Fetal thymus was measured in 330 normal fetuses between 18 to 28 weeks of gestation.
• Thymus area was measured by trace method.

Results

• The measurement was possible in all 330 fetuses.
• The predicted mean and 1st, 5th, 10th, 50th, 90th, 95th and 99th centile reference ranges of thymus area measurements at each gestational age are shown in table and graph below.

Discussion

This will help us identify a possible association of thymic hypoplasia with DiGeorge syndrome and trisomy 18 and 21.

The thymus area increased with increasing gestational age in a linear manner.

Thymus Area

Conclusion

• This study presents normogram of ultrasound measurements of fetal thymus area in Indian population.

The regression equation – 

\[ TA = 0.0114x^2 - 0.3277x + 3.0241 \]