

Prenatal Diagnosis of Idiopathic Clubfoot

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Objectives

The objectives of this study were to determine:

- The rate of prenatal diagnosis of clubfoot.
- Mothers' opinions about prenatal diagnosis of clubfoot.

Methods

Inclusion criteria:

- Infants born with clubfoot between 2000 and 2007
- Infants who underwent treatment at either the American center or the Austrian center

Exclusion criteria:

- Non-idiopathic clubfoot
- Multiparity

The survey consisted of three questions and a comments section:

- Did you have an ultrasound test before your baby was born?
- Did the ultrasound reveal clubfoot?
- Would you prefer to find out about your baby's clubfoot before or after your baby was born?

Results

- 401 mothers surveyed:
 - 190 Americans
 - 211 Austrians
- 220 surveys returned:
 - 105 American surveys
 - 115 Austrian surveys
- During routine ultrasonography, clubfoot was:
 - Detected (true positive) in 92 cases (42%).
 - Not detected (false negative) in 128 cases (58%).
- Overall:
 - 74% of mothers preferred prenatal diagnosis
 - 24% preferred knowing after birth
 - 3% were undecided

Examples of Prenatal Imaging of Clubfoot

Two-dimensional ultrasonogram obtained at gestational age 21 weeks



Three-dimensional ultrasonogram obtained at gestational age 29 weeks

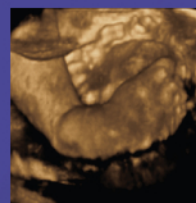


Figure 1. Detection rates.

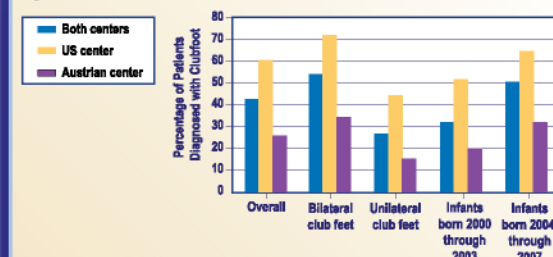


Figure 2. Detection rates at both centers related to year of birth.

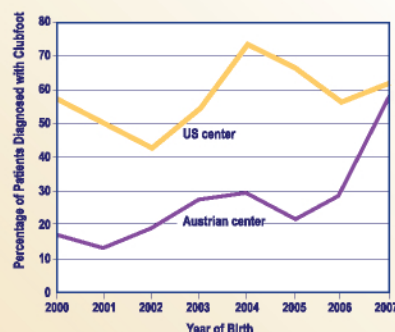


Figure 3. Diagnosis preference of surveyed mothers.

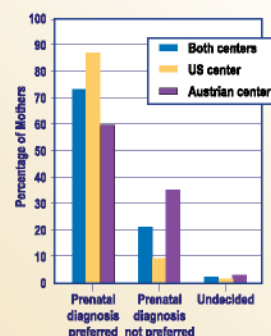


Figure 4. Diagnosis preference of surveyed mothers who received a positive ultrasonogram.

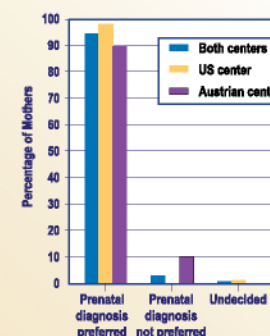
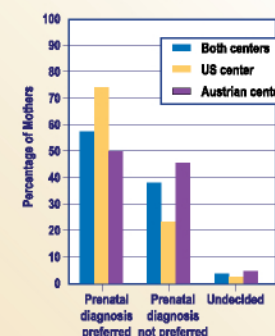


Figure 5. Diagnosis preference of surveyed mothers who received a negative ultrasonogram.



Conclusions

- Clubfoot is still missed during routine ultrasonography, especially in Austria where the rate of detection was lower than in the United States.
- Mothers in Austria seem more reluctant to receive prenatal diagnosis than mothers in the United States.
- Mothers who did not want a prenatal diagnosis commented that they feared that the diagnosis would have affected their pregnancy experience.
- When a prenatal diagnosis was made, mothers commented that they appreciated time to prepare and to research the condition and different treatment options.
- Detailed information about clubfoot and available treatment options should be provided to the mothers at the time of prenatal diagnosis. We encourage thorough prenatal examinations in which both feet are examined for clubfoot.

References

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