

# Women with cystic fibrosis can have successful pregnancies

Gilljam M, Antoniou M, Shin J et al. **Pregnancy in cystic fibrosis**. Chest 2000; 118:85-91.

## Question

What is the effect of pregnancy on pulmonary function and survival in women with cystic fibrosis (CF) and what is the fetal outcome?

## Design

Cohort study

## Setting

Cystic fibrosis program at a tertiary-care center in Toronto, Canada

## Participants

All women with cystic fibrosis who attended the Toronto Cystic Fibrosis Clinics between 1961 and 1998.

## Data collection

Data was obtained from the Toronto CF database, chart review and patient questionnaire

## Assessment of risk factors

Height, weight, pancreatic function, pulmonary function (by spirometry), presence and absence of *Burkholderia cepacia*, gestational age, birth weight, obstetric data.

## Main outcome measures

Mortality rate, pregnancy outcome and pulmonary function.

## Main results

There were 92 pregnancies in 54 women. Of those pregnancies, there were 11 miscarriages, 7 therapeutic abortions and 74 live births (in 49 women). There were six preterm deliveries and 4 babies who were small for gestational age. There was one neonatal death secondary to sepsis. Mean gestational age and birth weight were normal.

The overall mortality rate was 19% with a survival rate of 90% five years after delivery and 79% ten years after delivery. Causes of death were respiratory insufficiency and cepacia syndrome. Factors associated with increased survival included absence of *Burkholderia cepacia* ( $p < 0.001$ ), pancreatic sufficiency ( $p = 0.01$ ) and prepregnancy FEV1 > 50% of predicted ( $p = 0.03$ ).

Pregnancy did not affect survival compared to that in the entire adult female CF population when adjusted for age, pancreatic status, *B cepacia* status and pulmonary function. The decline of FEV1 seen during pregnancy was comparable to the decline seen in the total CF population.

## **Conclusions**

For most women with CF who became pregnant, the fetal outcome was good. Risk factors for mortality were similar to those in the nonpregnant CF population. Pregnancy does not seem to cause a decline in lung function or affect survival.

## **Commentary**

This data from a tertiary care CF clinic in Toronto is encouraging news for many women with CF who wish to have children. The fetal outcome was generally good. Although several women had complications during their pregnancy such as infections and need for hospitalization, pregnancy did not affect mortality or cause a decline in lung function. However, when counseling patients with CF about pregnancy, we have to take into account the selection bias present. The patients with the most severe disease who may expect the poorest outcomes may choose not to get pregnant or may have difficulty conceiving. All of these women should be managed in a multidisciplinary team approach.