

Pregnancy: The experience of an adult cystic fibrosis centre 1982-2005

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Background

- The majority of CF women who become pregnant have a normal pregnancy and delivery (1)
- If pre-pregnancy % predicted FEV₁ <50%, only 50% chance of good outcome for baby + high mortality for mother
- If pre-pregnancy % predicted FEV₁ > 60%, good outcome for baby and mother (2)
- Rate of decline may be a better indicator of prognosis than absolute lung function (3)
- Women with CF need to be in best possible shape for successful pregnancy for mother and baby (4).

Aim

- To report on pregnancy in CF women from 1982-2005.

Method

- A retrospective search of clinical notes was undertaken
- Data collected included age, lung function, medical/social status, terminations, delivery and maternal/child survival/outcome.

Results

- 33 women underwent 48 pregnancies between 1982-2005
- 2 further women have become pregnant to date.

Age at first pregnancy

- Range 14-38 yrs
- Median 24 yrs.

Pre-pregnancy

- 33% (11/33) employed/full-time education
- 42% (14/33) single
- 58% (19/33) married.

Termination of pregnancy

10% (5/48) due to

- mother's ill health 4/5
- pre-natal CF diagnosis 1/5

N.B. This is likely to be an underestimate. Previous audit in this centre via confidential questionnaire revealed further miscarriages / terminations, which had not been reported to the CF team (5).

Type of termination

- medical 3/5
- surgical 2/5

Women who continued with pregnancy

Pre-pregnancy % predicted FEV₁ was

- FEV₁ >60% = 33% (11/33)
- FEV₁ 50-60% = 15% (5/33)
- FEV₁ <50% = 15% (5/33)
- FEV₁ unavailable (notes no longer accessible) = 36% (12/33).

12 months post pregnancy: % predicted FEV was

- FEV₁ >60% = 33% (11/33)
- FEV₁ 50-60% = 15% (5/33)
- FEV₁ <50% = 15% (5/33)
- FEV₁ unavailable (notes no longer accessible) = 36% (12/33)

Postpartum: mothers' survival

- 91% (30/33) survived >2 yrs
- 48 % (16/33) survived >5 yrs
- 24 % (8/33) survived >10 yrs

Longest survival post partum: 17 yrs to date

- 24% (8/33) died leaving 8 children (age 5 wks to 12 yrs)
- 76% (25/33) survive with 34 children (age 20 mths to 17 yrs).

Survival of 5 mothers: Pre-pregnancy % predicted FEV₁ < 50%

- 2 women died <2 yrs post partum
- 1 (pre-pregnancy % predicted FEV₁ 48%), died 5 wks post partum: Hypercapnic Respiratory Failure /Acute Renal Failure +
- 1 (pre-pregnancy % predicted FEV₁ 45%) heroin/methadone addiction died 4 mths post partum: fatal GI bleed and Hypercapnic Respiratory Failure

- + 1 death, 3.2 yrs post partum: Hypercapnic Respiratory Failure

The exceptions!

2 women also determined to become mothers

- 1 non-adherent became adherent ++ lived 6 yrs (FEV₁ 50-60% predicted 12 mths post partum)
- 1 (pre-pregnancy FEV₁ 22% predicted) continues non-adherent 20 mths post partum with FEV₁ 20% predicted (range 12%-20%).

Type of delivery for all women

- Pre term 44% (19/43)
- Full term 56% (23/43)

- Vaginal 67% (29/43)
- Caesarean 33% (14/43).

Number of live babies born per woman

- 26 women - 1 baby
- 5 women - 2 babies
- 2 women - 3 babies.

Babies' survival

- 42/43 live born, 1 still born
- 38/42 no complications
- 4/42 complications
- mild neurological deficit - 2/4
- heart defect - 1/4
- heroin addiction - 1/4.

3/4 babies with complications were born to women with FEV₁ < 50% predicted

Conclusions

Pregnancy in this CF centre is viewed more positively, than in previous years. In line with previous research those women in better health had improved survival and outcome (1, 2).

Those with

- Pre-pregnancy % predicted FEV₁ >60% best outcome → mother and baby
- FEV₁ 50-60% ↑ complications for mother and baby
- FEV₁ < 50% ↑ complications ++ for mother and baby

It is now recognised that

- each woman should be given evidence based, unbiased pregnancy advice, individual to her personal circumstances
- one should never underestimate a woman's desire to become a mother.
- one should never underestimate a woman's desire not to be.

There is a need to

- optimise medical management, LF, nutrition and diabetes
- provide an educational package/patient information leaflets → heighten awareness of current research/CF Trust and Physiotherapy Guidelines regarding advice/care given to CF women before and during pregnancy (6, 7)
- provide funding/staffing → ↑ input to CF women → allow early discussion/assessment/modification of treatment before/during/after pregnancy.

Further study is currently being undertaken to evaluate this service and pregnancy outcomes.

References

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