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

L Gumery, S Ledbetter, L Kenyon, D Honeybourne, R Davies, A Gray, F King, West Midlands Regional Adult Cystic Fibrosis Centre, Heart of England NHS Foundation Trust, UK

Background

- The majority of CF women who become pregnant have a normal pregnancy and delivery (1, 2).
- 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


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 > 60% = 52% (17/33)
- FEV1 unavailable (notes no longer accessible) = 36% (12/33).

12 months post 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).

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 1 yr).

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%).

Types of delivery for all women

- Pre term 44% (19/43)
- Full term 56% (23/43)
- Vaginal 67% (29/43)
- Pre-term 44% (19/43)
- Full term 56% (23/43)

Number of live babies born per woman

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

Baby’s survival

- 42/43 live born, 1 still born
- 38/43 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 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 – allow early discussion/assessment/treatment for all women.
  - Further study is currently being undertaken to evaluate this service and pregnancy outcomes.

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References