Egg-donation in Denmark
Mission impossible?

Elisabeth C. Larsen
M.D., Ph.D.

- 7th International Turner Syndrome Conference August 28th 2009
  - Workshop
Why talk about egg-donation at a Turner syndrome conference?

• Because: In the majority of women with Turner syndrome **egg-donation** is the only way to become a **mother**.....
What am I going to talk about:

• The definition of egg-donation.
• Who needs donor-eggs?
• How does it work?
• Requirements to the Danish donors.
• Where do we get the eggs from?
  • The Danish legislation before January 1st 2007
  • The Danish legislation after January 1st 2007
• Danish results after 2 years with the new law
• Conclusion
• Future perspectives
What is Egg-donation?

• When a women (*the donor*) gives unfertilized eggs to a couple where the female partner (*the recipient*) has no eggs left in the ovary.
No eggs in the ovary. What does it mean?
No eggs in the ovary. What does it mean?
No eggs in the ovary. What does it mean?

Loss of hormone production
Who needs donor eggs?

- Premature menopause
- Ovaries removed
- Childhood cancer survivors
- **Turner Syndrome**
How does it work?

• The donated eggs are fertilized with the sperm from the recipient’s husband
Sperm from husband + Donated egg → Fertilized eggs → To celler 24 timer efter befrugtning
How does it work?

• The fertilized eggs are transferred to the uterus of the recipient
The fertilized egg is transferred to the uterus of the recipient.
Fourteen days later

Positive pregnancy test
The recipient is pregnant and gives birth...
Important to know:

• In Denmark egg-donation is based on the following principles:
  • *Egg-donation is performed anonymously*
  • *Egg-donation is voluntary*
  • *The donors are not payed for the eggs*
Not allowed in Denmark

"Congratulations! It's a cheque..."
Requirements to the Danish egg-donors

- Women < 35 years
- Healthy
  - No congenital diseases
  - No endocrine disorders (diabetes etc.)
  - No psychiatric disorders
- No inherited diseases in the nearest family
- Negative blood-tests
  - HIV
  - Hepatitis B
  - Hepatitis C
  - Syphilis
Where *did* we get the eggs from?

Until December 2006:

- "§ 14. When the purpose is to achieve a pregnancy in another woman egg-donation is only allowed if the eggs are retrieved from a woman already in fertility-treatment”
- In other words: the egg-donor has a fertility problem of her own…

- **EGG-SHARING**
Egg-donation in Denmark 2000-2006
(The number of ended treatments per year)

The Danish Fertility Society
Egg-donation in Denmark 2000-2006
(The number of ended treatments per year)

In Denmark 2006: 10.000 fertility treatments with egg-retrieval.

The Danish Fertility Society
Egg donation in Denmark 2000-2006
(The number of ended treatments per year)

In Denmark 2006: 5000 fertility treatments with donated sperm

The Danish Fertility Society
VEJLEDNING OM LÆGERS ANVENDELSSE AF KUNSTIG BEFRUGTNING OG ANDEN REPRODUKTIONS-FREMMEDE BEHANDLING
National Board of Health:
Recommendations to Danish fertility Doctors

VEJLEDNING OM LÆGERS
ANVENDELSE AF KUNSTIG
BEFRUGTNING OG ANDEN
REPRODUKTIONS-
FREMMENDE BEHANDLING
2006
Where *do* we get the eggs from?

Since January 2007:
- "It is now *also* allowed for women who do not receive fertility treatment to donate unfertilized eggs"

- **FERTILE DONORS**
Egg-donation in Denmark 2000-2008
(The number of ended treatments per year)

The Danish Fertility Society
Danish results: 2 years with the new law
Good news!

- 237 recipients were treated with egg-donation
- 125 got pregnant (pregnancy rate ≈ 37%)
Danish results: 2 years with the new law
Bad news!

- 220 couples are at present waiting for donor-eggs
- Waiting time: 3.2 years
- 400 – 600 couples have sought help in other countries in this time period
  - Difficult
  - Expensive
Is egg-donation in Denmark mission impossible?

NO!
Conclusion

• The change of recommendations - starting January 2007 – indeed has improved the egg-donation programme in Denmark
• But we still have a shortage of donor eggs.
Future perspectives

• Continue *Egg-sharing* as we have known for many years

• Continue the use of *Fertile donors* as we have known since January 2007

• *Cryopreserve ovarian tissue*

• Hopefully introduce *Crossed anonymous donation*
Cryopreservation:

- Remove an entire ovary (operation)
- Cryopreserve the tissue, which contains immature eggs.
- Storage at –180 degrees Celsius
- Adult woman: Insert thawed ovarian tissue in the other ovary (operation)
- Fertility treatment
- Egg-retrieval
Cryopreservation of ovarian tissue:

• Girls and adolescents who need cancer treatment
• Girls with Turner syndrome
  • When pregnant genetic counseling and prenatal screening
• A lot of promising research is being done at present
• In the future:
  • Maybe an offer to all girls with Turner syndrome
Crossed anonymous donation

• The couple that needs treatment with egg-donation finds a woman (close friend/sister) who wants to donate eggs to an "Egg-bank"

• In return the couple is guaranteed eggs from the bank