

স্বাস্থ্যযত্ন

ASSISTED REPRODUCTIVE TECHNOLOGY

Recent Research

Public View (October 11, 1997)
 Fertility information should be given to all couples, not just those who are infertile.

Health View 10, dated October 1997 (1997)
 Couples with small male fertility problems may not need treatment. But many do need help from advanced techniques, especially intracytoplasmic sperm injection.

Health View 10, dated October 1997 (1997)
 All definitions of severe spermatorrhea should be based on objective data, not just subjective indicators. It is important to have uniformity in the definition of severe spermatorrhea.



History
 In 1978, Louise Brown was the first baby born through IVF. The procedure was developed by Robert Edwards and Patrick Steptoe. It involves fertilizing an egg and a sperm in a laboratory dish. The resulting embryo is then transferred into the woman's uterus. IVF has since become a common fertility treatment for millions of couples.



Types of Reproductive Treatment

Artificial Insemination
 This involves placing sperm directly into the uterus. It can be done naturally or using a syringe.

In Vitro Fertilization (IVF)
 This involves fertilizing an egg and a sperm in a laboratory dish. The resulting embryo is then transferred into the uterus.

Intracytoplasmic Sperm Injection (ICSI)
 This involves injecting a single sperm into an egg. It is often used for men with low sperm counts.

Assisted Reproductive Technology (ART)
 This term refers to any medical procedure that helps a woman get pregnant. It includes IVF, ICSI, and other techniques.

Female Reproductive System

The female reproductive system consists of the ovaries, fallopian tubes, uterus, and vagina. The ovaries produce eggs, and the fallopian tubes transport them to the uterus. The uterus is where the embryo implants and develops.

In Vitro Fertilization

In vitro fertilization (IVF) is a process where an egg and a sperm are fertilized in a laboratory dish. The resulting embryo is then transferred into the uterus.



Embryo Transfer
 This is the final step in IVF, where the fertilized egg (embryo) is placed into the uterus. It is done using a thin tube called a catheter.

Implantation
 After the embryo is transferred, it implants itself in the lining of the uterus. This is where it begins to grow and develop.



Embryo Development
 The fertilized egg develops into a zygote, which then becomes a morula and finally a blastocyst. The blastocyst is the stage at which it is transferred to the uterus.

Success Rates
 The success rate of IVF varies depending on the age of the woman and other factors. It is generally higher for younger women.



IVF Process
 The process of IVF involves several steps: stimulation of the ovaries, retrieval of eggs, fertilization in the lab, and transfer of the embryo to the uterus.

Costs
 IVF can be expensive, often costing thousands of dollars per cycle. Insurance coverage varies, so it's important to check with your provider.



DEPARTMENT OF ZOOLOGY

Nature Reviews Cardiology 15,
656 (2018).

Assisted reproductive technologies increase risk of hypertension in offspring.

Scientific Reports 10, Article number:
2350 (2020).

Couples with mild male factor infertility and at least 3 failed previous IVF attempts may benefit from laproscopic investigation regarding assisted reproduction outcome.

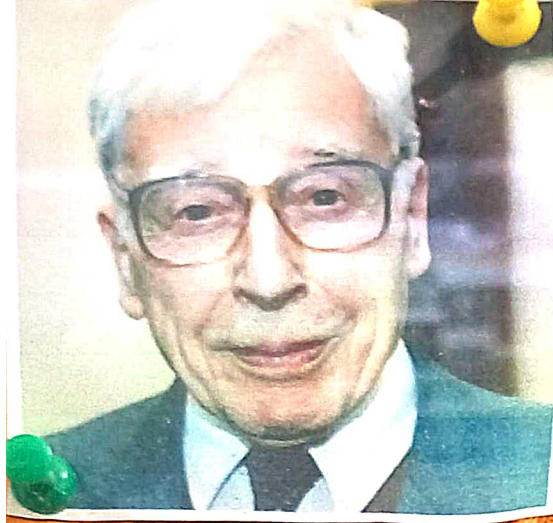
Scientific Reports 10, Article number:
12907 (2020)

LH Supplementation of ovarian
stimulation protocols influences
follicular fluid steroid composition
contributing to the improvement
of ovarian response in poor
responder women.

History

25 July 1978: Louise Brown was born; this was the first successful birth of the child after IVF treatment. The procedure took place at Dr. Kershew's Cottage Hospital in Royton, Oldham, English. Patrick Steptoe (gynaecologist) and Robert Edwards (physiologist) worked together to develop the IVF technique. Steptoe described a new method of egg extraction and Edwards was carrying out a way to fertilise eggs in the lab. Robert G. Edwards was awarded the Nobel Prize in Physiology or Medicine in 2010, but not Steptoe because the Nobel prize is not awarded posthumously.

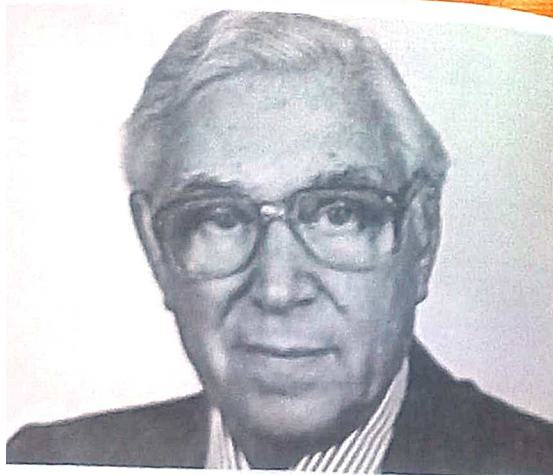
The first successful birth by ICSI (Intracytoplasmic sperm injection) took place on 14 January 1992. The technique was developed by Gianpiero D. Palermo at the Vrije Universiteit Brussel, in the Center for Reproductive Medicine in Brussels. Actually, the discovery was made by a mistake when a spermatozoid was put into the cytoplasm.



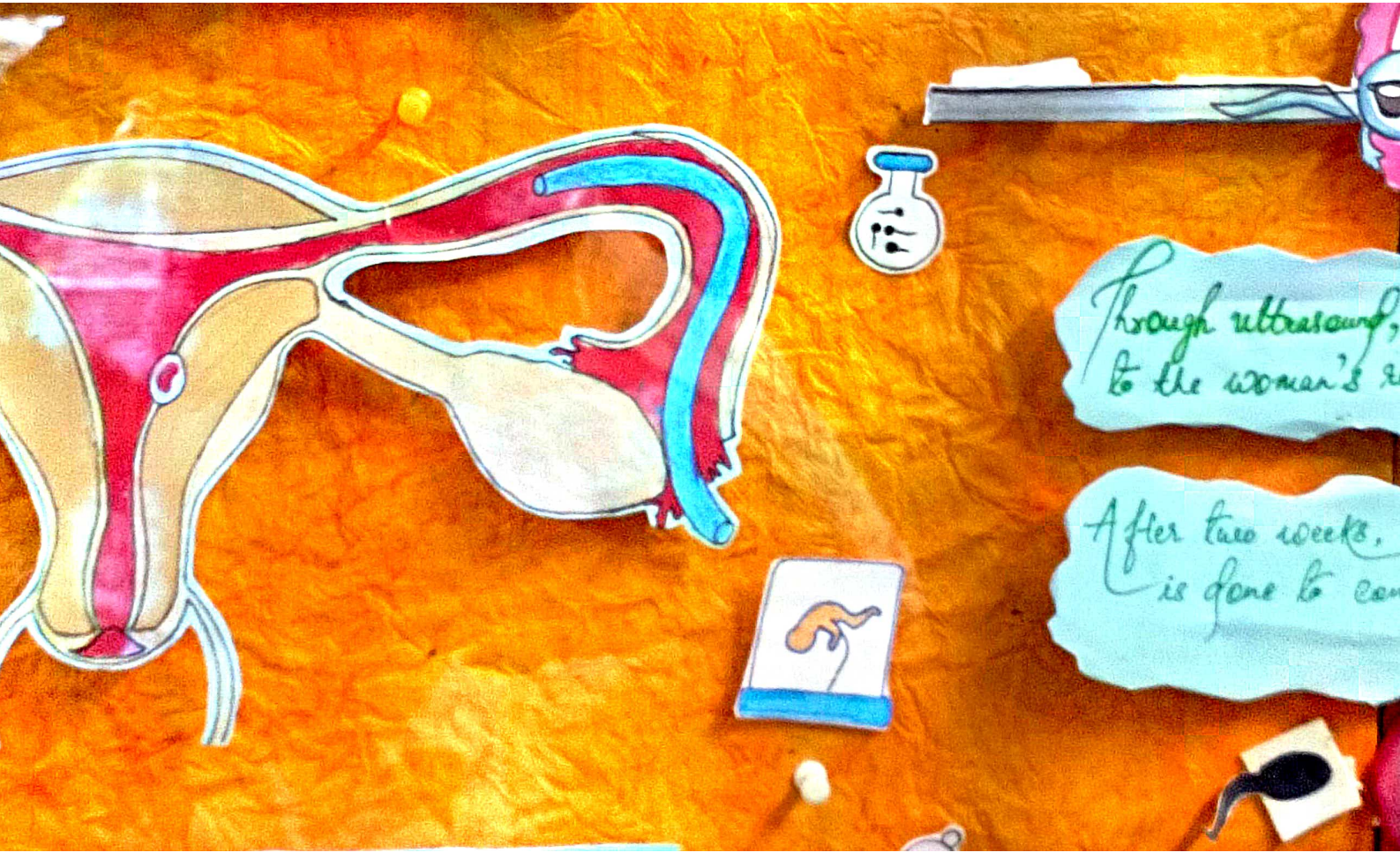
ROBERT GEOFFREY



LOUISE JOY BROWN



PATRICK CHRISTOPHE



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to the woman's r

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is done to con

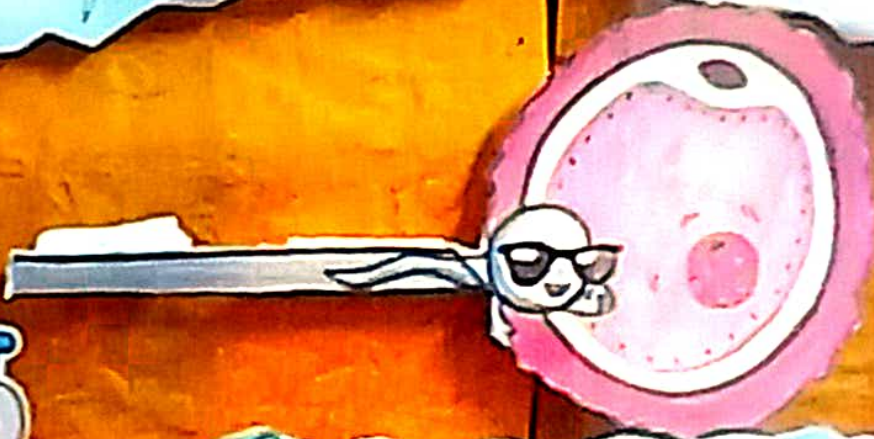
IVF

For ovarian stimulation, medications are given for 8 to 14 days to help the ovaries to produce enough eggs.

Healthy and viable sperm sample is collected.

Eggs are retrieved from the patient during transvaginal aspiration.

The sperm sample is injected into the egg directly for fertilization.



Through ultrasound, embryo is transferred to the woman's reproductive tract.

After two weeks, pregnancy test is done to confirm the pregnancy.



Gamete Intrafallopian Transfer



Gamete intrafallopian transfer (GIFT) is a three-step procedure that involves removing the eggs, combining them with sperm and immediately placing them in the fallopian tube, where the egg is fertilized.

In Vitro Fertilization

The woman is given hormone treatments to stimulate egg production.



Multiple eggs are taken from the woman's ovaries.



In the lab, the eggs are mixed with the man's sperm cells in a culture dish to become fertilized.



The fertilized eggs or embryos are placed in an incubator for about 48 hours.



Embryos are implanted in the woman's uterus or frozen for future implanting.



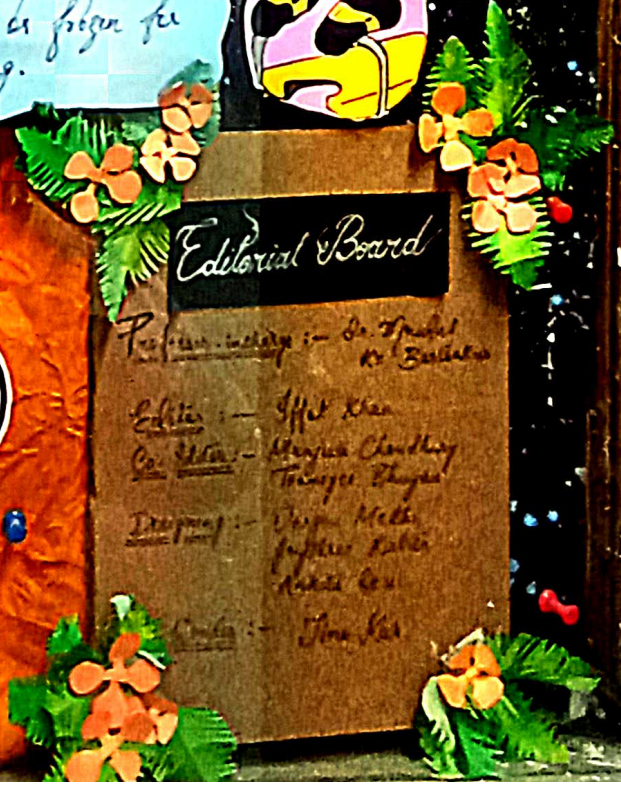
Balloon Tuboplasty

Balloon tuboplasty involves the insertion of a catheter through the cervix into the fallopian tube to the point of obstruction; a small deflated balloon is then inserted through the catheter and inflated to dilate the tube.



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