

STEINER Egg Collection Technique in 21st Century

CUMULATIVE PR: new definition for success in ART :

Introduction:

It is a great pleasure for me to share my experience in hum. IVF since 30 years. After studying my comments below, you will agree, that we have to flush all follicles, independently of individual number of follicles.

May I ask you to read carefully my book chapter

http://ivfetflex.com/files/bilder_peter/textbook_ch16.pdf

Textbook of Minimal Stimulation IVF – Milder, Mildest or Back to Nature

Gautam N Allahbadia, Alejandro Chávez-Badiola (Eds)
Jaypee Brothers Medical Publishers (P) Ltd, New Delhi

From the very beginning my goal was to find out the discrepancy in techniques in Egg Collection worldwide.

80 % is using a SL Needle, most of them without flushing follicles

20% is using a DL Needle.

My question was (and is): Why should flushing be a benefit in Poor Responders only and not in Normal Responders?

I think, I was able to find the answer: **It is not the question, if flushing of follicles per se is bringing us a benefit in number of oocytes, a benefit is only possible, if we use an adequate Needle System for flushing.**

You can read in my book chapter, that the potential advantage of flushing with conventional DL Needles on the market is negatively compensated by inadequate properties of fluid dynamics during aspiration and flushing as well due to diminished inner diameter of the 2 components.

Please see video comparing flushing effect of STEINER-TAN Needle 21(!) gauge vs. COOK 17 gauge DL Needle.

https://www.youtube.com/watch?v=5jtAcZi_AWkk

With COOK DL you can refill the follicle only very slowly without achieving a proper flushing effect. Please note, that STEINER-TAN Needle offers an optimal flushing effect in 17, 19 and even in 21gauge.

Arguments prior introduction of STEINER Egg Collection Technique in favour of non flushing in Normal Responders:

- 1.) Flushing brings no benefit in PR in fresh cycle. This argument is no longer acceptable, because ethically correct definition of success rates is **CUMULATIVE PR**. Recent publication in Fert. Ster. states, that 1 additional oocyte in Egg Collection increases Cum. PR out of 8%!
- 2.) Longer duration of OPU procedure: same number of eggs, if you compare conventional SL vs. DL Needles! But duration of OPU with conventional DL is doubled.
- 3.) Expensive DL Needle on the market.
- 4.) More eggs rise costs for IVF Centers (more Media, time for ICSI etc.) Potentially reduction of IVF attempts/patient?

STEINER-TAN Needle is a combination of SL and DL Needle with 50% shorter asp. and flushing time. Price at least 30% cheaper as DL Needles on the market. Computer Animation explains the effect of this technology:
<https://www.youtube.com/watch?v=F-Wqeya1l-c>

Affordable Flushing Medium: we share following recipe with you

500 ml MEM with Earle's Salts without L-Glutamine price for: 500ml € 9.9 plus 20% Taxes: enough for 3-4 patients.

Art. Number: E15-024

To order at **PAA Laboratories** Tel 0043/722964865 Vienna or your local Distributor.

5 ml L-Glutamine 200 mM Art. Number: M11-004

0,5 ml Penicillin G-Natrium 1 MEGA IE

(ampoules with 5ml A.Bidest solve - to use 0,5 ml, remain can be frozen in portions) 0,125 ml Heparin Immuno 5000 I.E./ml (Pharmacy) 11 ml A.Bidest L-Glutamine, Penicillin, Heparin und A.Bidest sterile filtered mixed with MEM.

Some Centers are defining a fixed volume for flushing follicles independently of individual follicle size. E.g. 2cc for 1 follicle of 20mm!

Which Needle Size?

In order to minimize pain and discomfort for our patients we should use the smallest needle with maximal effect.

Current needles on the market are mostly 17gauge in SL Needles and 16gauge in DL Needles.

If I could convince you to change to STEINER Egg Collection Technique you will have 2 options:

A.) OPU with your current Needle Guide: STEINER-TAN Needle 17gauge CLASSIC
http://ivfetflex.com/needles_current/steiner-tan-needle-17-gauge-classic.html

Video with 850 00 clicks: <https://www.youtube.com/watch?v=LD4HXwu8hgk>

B.) OPU with Special Needle Guide, manufactured by IVFETFLEX.COM

<http://ivfetflex.com/needles-steiner.html>

STEINER-TAN Needles 17, 19, 21gauge (all for flushing follicles) can be used individually:

Normal IVF: STEINER-TAN Needle **17gauge** in normal responders.
But there is a tendency that our customers change towards STEINER-TAN Needle **19gauge** Needles due to it's remarkable pain release.

Poor: Responder IVF: I personally prefer STEINER-Tan 19gauge.

Spontaneous Cycle IVF, 1-2 Follicles in Stim. IVF: STEINER-TAN 21gauge.

IVM: depending on follicle size: follicles 10mm in average: STEINER-TAN 19gauge
follicle below 7mm: STEINER-TAN 21gauge
<https://www.youtube.com/watch?v=HSDTUd4M0w4>

AVOIDING LOSS OF TEMPERATURE

Avoiding loss of temperature is frequently neglected.

Example: one of IVF Centers with highest reputation worldwide is **UZ Brussels**.
During a visit at this Clinic I saw following Egg Collection Technique. 17 gauge SL

Needle. After the follicle is collapsed, an assistance has to inject flushing medium into aspiration tubing inserted at Silicone stopper. Assistance is manipulating a syringe filled with flushing medium by hand. Hand temperature approx. 29 °!
With this technique many aspirated oocytes are sent back into follicle!
Hazard of contamination, because it is no closed system. **Positive aspect is the fact, that this Clinic is flushing in Normal Responders!**
Kopenhagen Fert. Center: aspiration by holding a 20cc Syringe in hand!
Disadvantage: lack of controlled asp. pressure, loss of temperature etc.

STEINER Flush/Valve, Mechanical or electr. Flushing Pump

<https://www.youtube.com/watch?v=tmfTAzIVvZI>

Mechanical:

<https://www.youtube.com/watch?v=5T0GZdvH9G888>

Electronical:

<http://ivfetflex.com/flushing-pumps/steiner-flush-valve-electronic-flushing-pump.html>

Physician can chose volume of flushing medium, velocity and pressure during flushing procedure.

STEINER Vial Warmer with Sinus Signal

<http://ivfetflex.com/vial-warmer.html>

First Vial Warmer worldwide with Sinus Signal, as soon as Vial has to be changed. Reducing stress for both assistance and physician as well. Benefit in Operation Rooms with reduced light. Protection against damaging Aspiration Pump.

STEINER Scraper

Video: <https://www.youtube.com/watch?v=BsGSamXiPp8>

Any OPU Needle on the market can be clicked at this device.
As soon as asp.is turned on, STEINER Scraper makes a rotating movement of 110°.
Additional advantage: optimal view of needle tip (blinking of needle tip on US).

NOTE: special view of 21gauge STEINER-TAN Needle in IVM. Blinking needle tip during flushing.

CONCLUSION:

Hopefully all this parameters together will be the begin of rethinking of current OPU Techniques and will be a basis to create correct Guidelines in Technique of Egg Collection in ART and optimize clinical PR remarkably due to higher percentage of oocytes/ follicles without increasing hormones in our Stim. Protocol.

Please contact me, if you have any idea for further technical improvement in ART!

Yours sincerely

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www.ivfETFflex.com