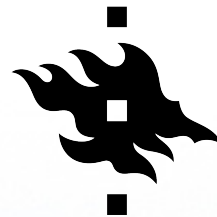


A randomised controlled trial of
Immediate initiation of contraception by
levonorgestrel-releasing intrauterine system
after medical abortion
- one year continuation rates

Riina Korjamo, MD

14th Oct 2016

Lisbon



UNIVERSITY OF HELSINKI

Funding:

Hospital district of Helsinki and Uusimaa

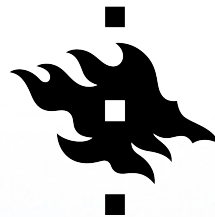
Finnish cultural foundation

Finnish-Norwegian Medical Foundation

No conflicts of interests to declare

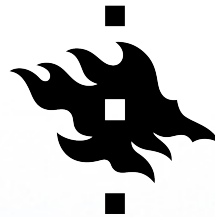
BACKGROUND

- Safe insertion of intrauterine device (IUD) at the time of the vacuum aspiration (Pakarinen 2003, Grimes 2010, Steenland 2011)
 - higher uptake of IUDs compared with delayed insertion
 - decrease repeat abortion rate (Heikinheimo 2008, Cameron 2012)
- Medical abortion the dominant method in recent decades
 - 95% in Finland 2014 (National Institute of Health and Welfare, Finland, 2015)
- Up to half the patients fail to attend to follow-up (Pohjoranta 2011, Cameron 2012)



MATERIALS AND METHODS

- A randomised controlled trial
- Medical abortion ≤ 20 weeks of gestation
- **Immediate** (same day/ ≤ 3 days) vs. **Delayed** (within 2-4 weeks)
 - Levonorgestrel-releasing intrauterine system (LNG-IUS)
 - Women ≥ 18 years
 - Helsinki University Hospital
 - Between Jan 30nd 2013 and Dec 31st 2014
- The primary outcome: the LNG-IUS use 1 year after abortion
- Secondary outcomes: expulsions, repeat pregnancies, abortions within 1 year



Randomised 267

Immediate-insertion 134

- Excluded 1
(continued pregnancy)

Delayed-insertion 131

- Excluded 2
(susp. cervic. Neoplasia)

Medical abortion: mifepristone 200mg p.o. + 24-72h later misoprostole

- 800µg at home (\leq 63 days of gestation)
- 400 µg every 3 hours until fetal expulsion at hospital (\geq 64 days of gestation)

LNG-IUS insertion 126

- within 3 days (\leq 63 days of gestation)
- before leaving hospital (\geq 64 days of gestation)
- Immediate insertion failed 1

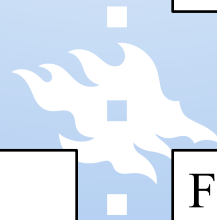
Follow-up 2 to 4 weeks 121

Follow-up 2 to 4 weeks 115

LNG-IUS insertion 111

Follow-up 1 year 89

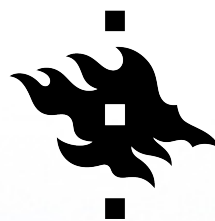
Follow-up 1 year 63



Demographics of the study participants

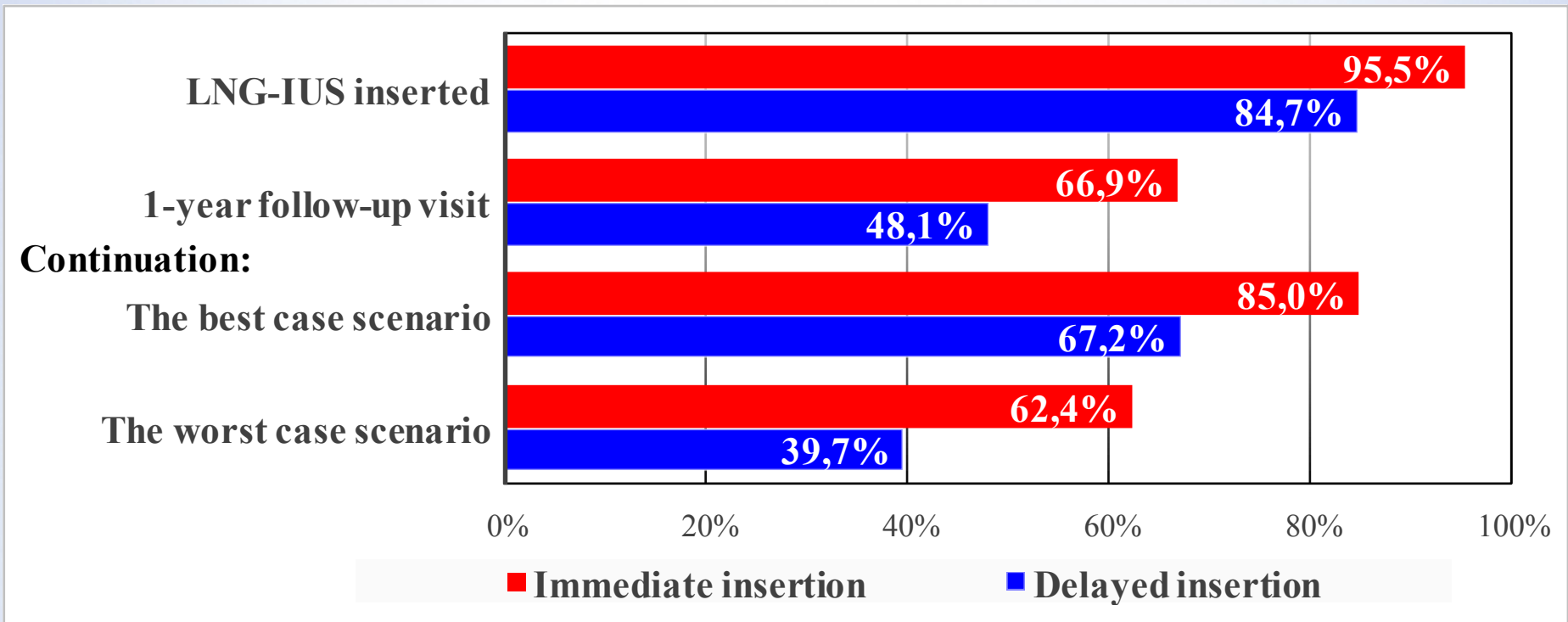
	Immediate insertion n = 133	Delayed insertion n = 131
Age (years)	27.3 (23.1–32.3)	27.1 (22.3–32.1)
BMI*	23.6 (21.7–26.5)	23.3 (21.1–26.9)
History of pregnancy	89 (66.9%)	92 (70.2%)
History of delivery	71 (53.4%)	68 (51.9%)
History of abortion	57 (42.9%)	63 (48.1%)
Gestational age (days)	67 (51.5–78.5)	67 (52–81)
≤ 63 (n = 55 vs. 53)	48 (45–56)	50 (46.5–56.5)
64 to 84 (n = 51 vs. 50)	71 (68–76)	72 (67–76.3)
85 to 140 (n = 27 vs. 28)	105 (96–116)	111 (98–122)

Data are presented as median
(interquartile range), or n (%)
*BMI = body mass index



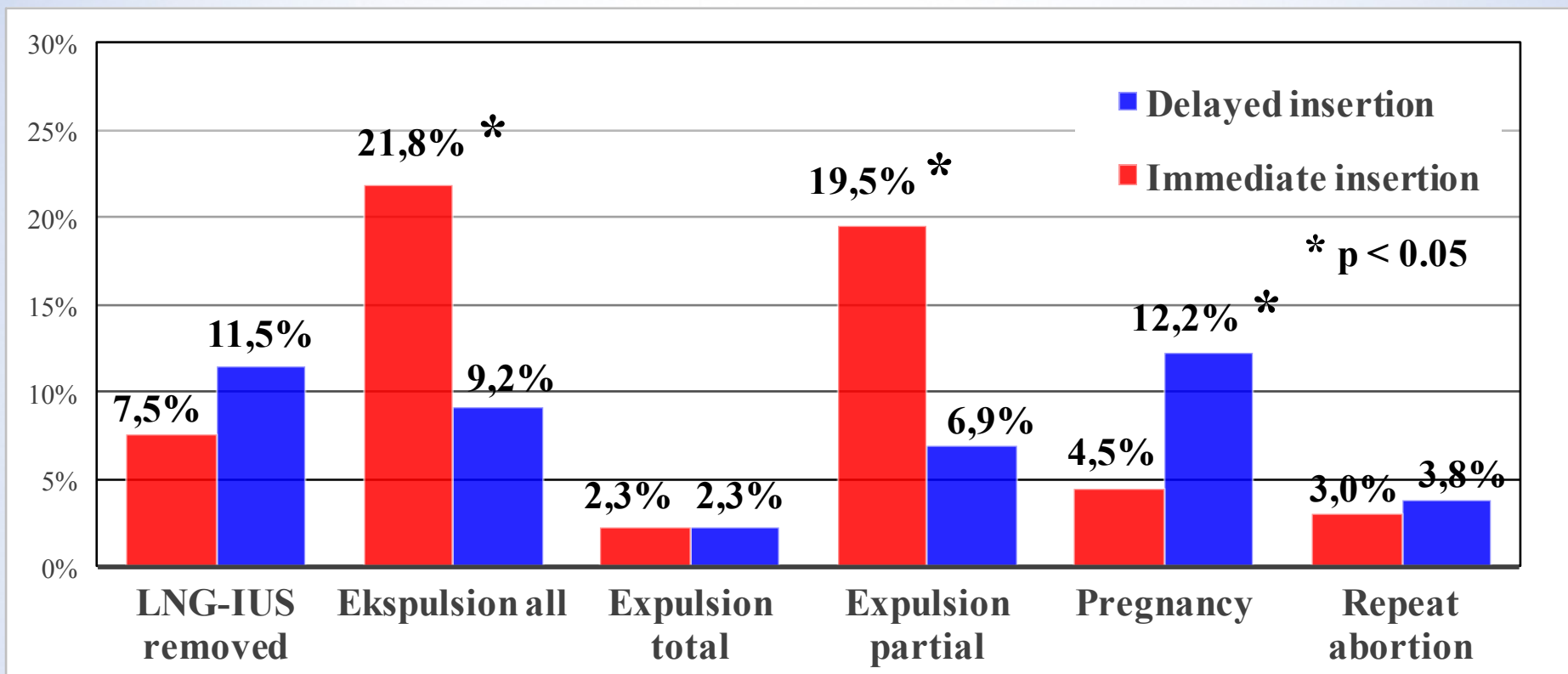
UNIVERSITY OF HELSINKI

RESULTS



	Immediate insertion n=133		Delayed insertion n=131		OR	95% CI	p-value
LNG-IUS inserted	127	95.5%	111	84.7%	3.81	1.48 – 9.83	0.004
1-year follow-up visit	89	66.9%	63	48.1%	2.18	1.33 – 3.59	0.003
The best case scenario	113	85.0%	88	67.2%	2.76	1.52 – 5.03	0.001
The worst case scenario	83	62.4%	52	39.7%	2.52	1.54 – 4.14	0.000

RESULTS



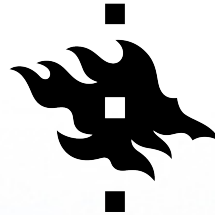
	Immediate insertion n=133		Delayed insertion n=131		OR	95% CI	p-value
LNG-IUS removed	10	7.5 %	15	11.5 %	0.63	0.27 – 1.46	0.300
Ekspulsion all	29	21.8 %	12	9.2 %	2.77	1.34 – 5.69	0.006
Ekspulsion total	3	2.3 %	3	2.3 %	0.98	0.20 – 4.97	1.000
Ekspulsion partial	26	19.5 %	9	6.9 %	3.29	1.48 – 7.34	0.003
Pregnancy	6	4.5 %	16	12.2 %	0.34	0.13 – 0.90	0.027
Repeat abortion	4	3.0 %	5	3.8 %	0.78	0.21 – 2.98	0.748

DISCUSSION

- Drop out rate high → Clinical records revised, sensitivity analysis

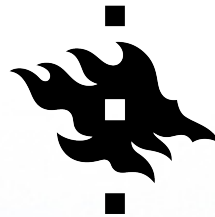
- Immediate uptake rate 96%
 - Similar at vacuum aspiration or D&E 90-100% (Bednarek 2011, Cremer 2011, Hohmann 2011)
 - Similar within ~1 week after early (<9weeks) medical abortion 94-97% (Shimoni 2011, Sääv 2012)

- One-year continuation rate 62% (the best case 85%)
 - Six month continuation 68-94% (Ortayli 2001, Rose 2010, Cremer 2011, Hohmann 2011, Shimoni 2011, Sääv 2012)
 - One year continuation 71-90% (Ortayli 2001, Pakarinen 2003)
 - Three year continuation 29-61% (Ortayli 2001, Pakarinen 2003)



DISCUSSION

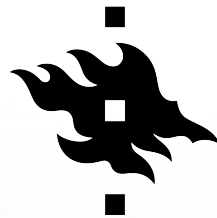
- Total expulsion rate 2.3% comparable to seen
 - after surgical abortion; 4.9-7.1%
(Pakarinen 2008, Bednarek 2011, Ortayli 2001, Drey 2009)
 - after early (≤ 63 days of gestation) medical abortion; 4.1-9.7% (Betstadt 2011, Cameron 2012, Sääv 2012)
- The rate of 21.8% expelled or displaced LNG-IUS
 - Parallel with 24% after post-placental insertion following vaginal delivery (Chen 2010)
- Repeat abortion rate 3.0%
 - Similar than 2.4-6.1% seen after immediate or “enhanced” initiation of intrauterine contraception (Pohjoranta 2015, Goodman 2008, Heikinheimo 2008)



CONCLUSION

Immediate insertion of the LNG-IUS after medical abortion

- Higher uptake
- Higher continuation rates despite of higher partial expulsion rates



UNIVERSITY OF HELSINKI

Our team:
Prof Oskari Heikinheimo
MD, PhD Maarit Mentula
Research nurse Pirjo Ikonen

Thank you!



