



**Karolinska
Institutet**

Quickstarting implants after medical abortion

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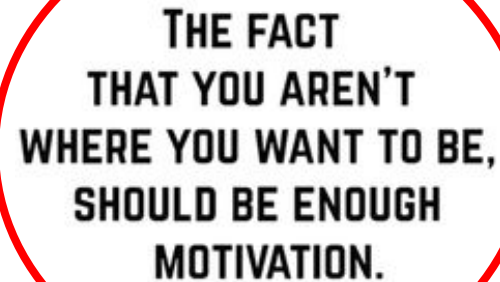
Danderyd Hospital and Karolinska Institutet

The background for quickstart

- Women who have had one abortion are at a higher risk of having another abortion
- LARCs (implants and IUC) have been shown to reduce rates of repeat abortion (Rose et al, Heikinheimo et al, Cameron et al, Brynhildsen et al)



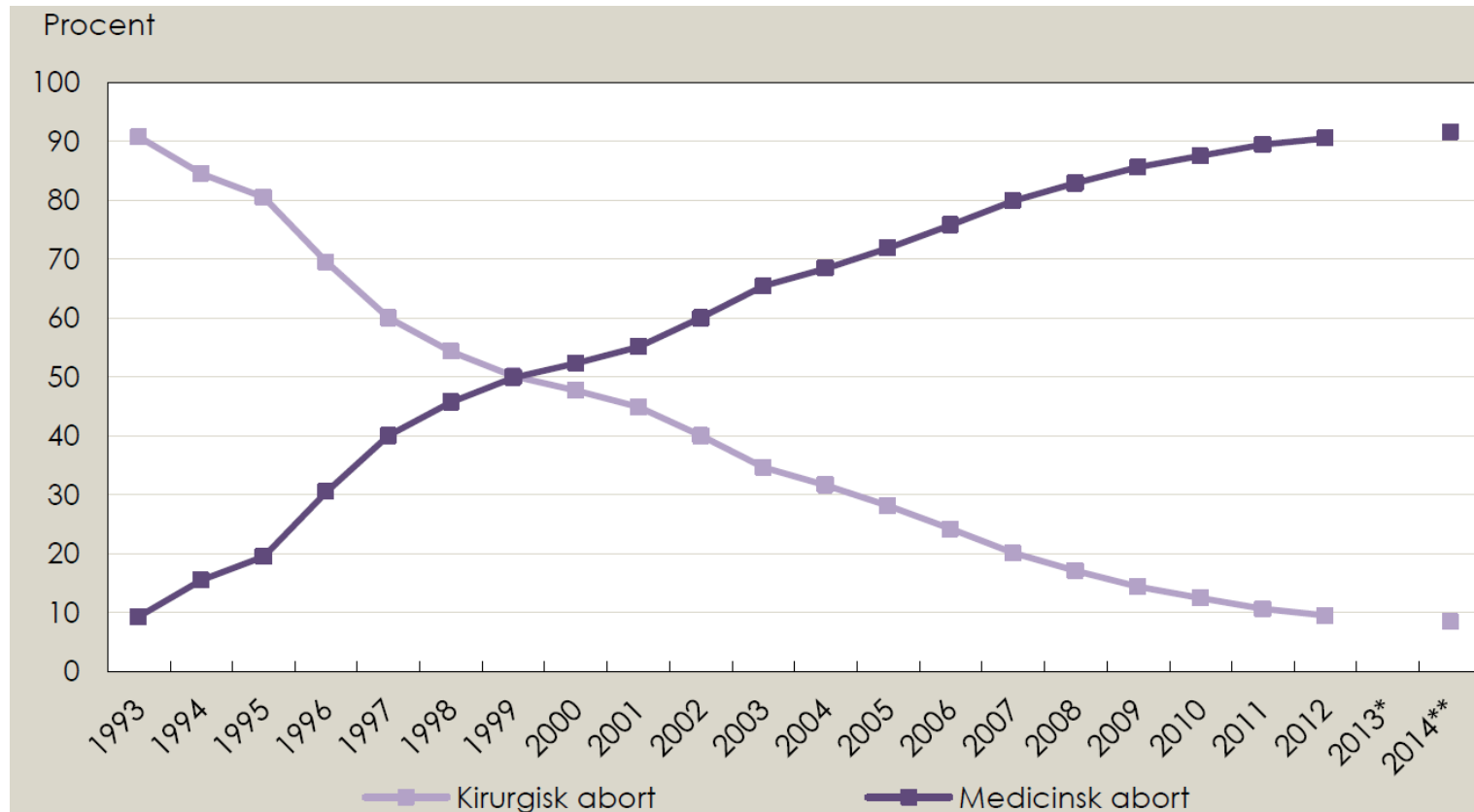
Study background



**THE FACT
THAT YOU AREN'T
WHERE YOU WANT TO BE,
SHOULD BE ENOUGH
MOTIVATION.**

- Motivation to start contraception is highest at the time of the abortion and decreases thereafter
- Many women do not come for the FU visit after medical abortion
→ Never get the desired LARC
- The only LARC which could theoretically be inserted at the time of mifepristone administration is the implant

Surgical abortion before 9 weeks



- 68% of all abortion <9 weeks are home abortions
- Downside of medical abortion...? Can we solve this?

Study background



- Nexplanon contains etonogestrel- a progestin
- Mifepristone is a progesterone receptor antagonist
- Interaction has been feared and shown in emergency contraception-
lowered efficacy of mifepristone?
- Receptor affinity?
- Plasma max of mifepristone is 1 hour
- If mifepristone is given 1 hour prior to inse
to receptors



Observational studies



Contents lists available at ScienceDirect

Sexual & Reproductive Healthcare

journal homepage: www.srhcjournal.org



The contraceptive implant for long acting reversible contraception in patients undergoing first trimester medical termination of pregnancy

E. Church *, S. Sengupta, K.V. Chia

Royal Bolton Hospital, Farnworth, Bolton BL4 0JR, UK

- First study published
- 39 women <13 weeks who chose implant compared to 39 with other contraceptives
- Efficacy was 89.7% in implant group compared to 97.4%
- Not very reassuring
- Lots of bias- nonblinded, higher GA in implant group...

Next observational study



Contraception 88 (2013) 671–673



Contraception

Original research article

Administration of the etonogestrel contraceptive implant on the day of mifepristone for medical abortion: a pilot study☆☆☆,★

Sarita Sonalkar^{a,*}, Melody Hou^b, Lynn Borgatta^a

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- Implant placed within 15 minutes of mifepristone administration
- 20 patients, 16 could be followed up for 1 year
- 14/19 were satisfied with implant timing
- 14/19 had continued use at one year
- Small study, difficult to judge efficacy due to small sample
19/20=95%

Largest observational study



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Contents lists available at [ScienceDirect](#)

European Journal of Obstetrics & Gynecology and Reproductive Biology

journal homepage: www.elsevier.com/locate/ejogrb



Intra-abortion contraception with etonogestrel subdermal implant



Isabel Barros Pereira *, Rui M. Carvalho, Luís M. Graça

Clínica Universitária de Obstetrícia e Ginecologia, CHLN, Hospital Universitário de Santa Maria, Faculdade de Medicina da Universidade de Lisboa, CAM – Centro Académico de Medicina de Lisboa, Lisbon, Portugal

- 57 women chose immediate placement
 - Efficacy 96.5%
 - At 6 months 42/57 women (73.7%) had continued use
- 62 women chose delayed placement
 - Efficacy 98.4%
 - Follow up within 4 weeks completed by 59% of women
 - only 10/62 (16.1%) had the implant inserted
- Nonblinded, efficacy determined by telephone follow up

Need for larger randomized studies

- Medical abortion is a common procedure affecting many women-
 - Small differences in efficacy may still affect many women
- Efficacy of medical abortion is high
 - Large numbers are needed to find small differences
- Bias in women choosing one or the other timing needs to be eliminated
- Remaining bias
 - Not possible to blind timing of insertion for
 - Woman
 - Provider
 - May lead to intervention bias?
 - More or fewer interventions in the interventions group???

Study in US and Mexico

Original Research

Effect of Immediate Compared With Delayed Insertion of Etonogestrel Implants on Medical Abortion Efficacy and Repeat Pregnancy

A Randomized Controlled Trial

Elizabeth G. Raymond, MD, MPH, Mark A. Weaver, PhD, Yi-Ling Tan, MPH, Karmen S. Louie, Manuel Bousiéguez, MBA, Elba M. Lugo-Hernández, MD, Ana Gabriela Aranguré-Peraza, MD, Patricio Sanhueza, MD, Clair Kaplan, MSN, APRN, Sarita Sonalkar, MD, MPH, Alisa B. Goldberg, MD, MPH, Kelly R. Culwell, MD, MPH, Lisa Memmel, MD, MS, Roxanne Jamshidi, MD, MPH, and Beverly Winikoff, MD, MPH

Raymond study

- Eligible women:
 - outpatient administration as according to local site
 - Intended to take mifepristone on same day
- 236 women in Quickstart group
 - women received implant before leaving study site
 - Vast majority received implant within one hour of mife (personal communication Elisabeth Raymond)
- 240 in Afterstart group
- Available for final analysis were 229 and 234 respectively
- Efficacy was
 - 96.1% in quickstart group
 - 96.2 % in the afterstart group
 - 3/9 surgeries in each group were in patients beyond 64 days GA
 - 2 ongoing pregnancies in each group



Raymond study- long term follow up

- Women in afterstart group receiving LARC within 31 days was
 - 87% in Mexico and
 - 67% in the US
 - However, at 6 months there were no significant differences between countries.
-
- Women were significantly more satisfied with the quickstart timing of insertion
→ especially after having had a complete abortion.
-
- No differences in repeat pregnancy could be detected within 6 months
-
- Conclusion- quickstarting of implants would have greatest impact in a setting with low follow up rates



Swedish and Scottish setting

- 50% of women do not come for follow up
- 550 women recruited
 - 277 randomized to immediate group-
insertion at 1 hour after mife
 - 261 to delayed group-
insertion at 2-4 weeks at follow up

3 centers in Stockholm, 1 in Gothenburg and 1 Örebro



Primary and secondary outcomes

- Surgical intervention was
 - 16/275 (5.8%) in immediate group
 - 10/249 (4%) in delayed insertion group
 - 8 of these women had surgery after the scheduled follow up at 2-4 weeks
- Conclusion to this-
 - For efficacy of medical abortion evaluation needs to be beyond 4 weeks post abortion
- Use at 3 months and 6 months was significantly higher in the immediate group
- Removals due to bleeding disturbances, acne and mood were most common

**Don't go
back
to less,
just
because
you're
too
impatient
to wait
for the
best.**

Acceptability- asked at follow up



Allocation:	Immediate (N=277)	Delayed (N=261)	
Future choice			
Immediate	180/277 64.9%	102/261 39%	Preferring allocated
Delayed	12/277 4.3%	51/261 19.5%	p<0.001
Missing answer	85/277 30.7%	108/261 41.3	

Repeat unwanted pregnancy

- At 3 months
 - No pregnancies in immediate group
 - 4 pregnancies in delayed group
 - All 4 pregnancies in women who never came for insertion
- At six months
 - 2 pregnancies in immediate group- discontinuations and abortions
 - 6 pregnancies in delayed group-
 - one removal (miscarriage) and 5 "never inserted" (abortions)
- $P=0.018$ at six months

Retrospective studies

International Journal of Gynecology and Obstetrics 133 (2016) 329–333



www.elsevier.com

Contents lists available at ScienceDirect

International Journal of Gynecology and Obstetrics

journal homepage: www.elsevier.com/locate/ijgo



CLINICAL ARTICLE

Efficacy of early induced medical abortion with mifepristone when beginning progestin-only contraception on the same day



Megan Douthwaite^{a,*}, Jose A. Candelas^b, Barbara Reichwein^c, Carla Eckhardt^d,
Thoai D. Ngo^c, Adriana Domínguez^d

^a Research, Monitoring and Evaluation Team, Health System Department, Marie Stopes International, London, UK

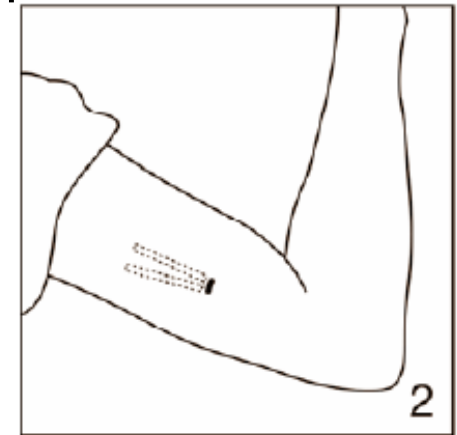
^b Research and Evaluation, Marie Stopes Mexico, Mexico Distrito Federal, Mexico

^c Marie Stopes International, London, UK

^d Marie Stopes Mexico, Mexico Distrito Federal, Mexico

Marie Stopes study

- 4 Marie Stopes clinics in Mexico
- Women <9 weeks with complete follow up
- 448 (20.3%) patients had started progestin-only contraception,
→ less likely to be primigravidae and nulliparous
- 1756 (79.7%) controls on other types of contraception
- Progestin only contraceptive methods included
 - 2-months, 3-month Injectables
 - 5-year, 4-year, 3 year implants
 - Administered within 15 minutes of mifepristone



Marie Stopes study

- Success rate
 - In immediate progestin group 94%
 - In control group 94.8%

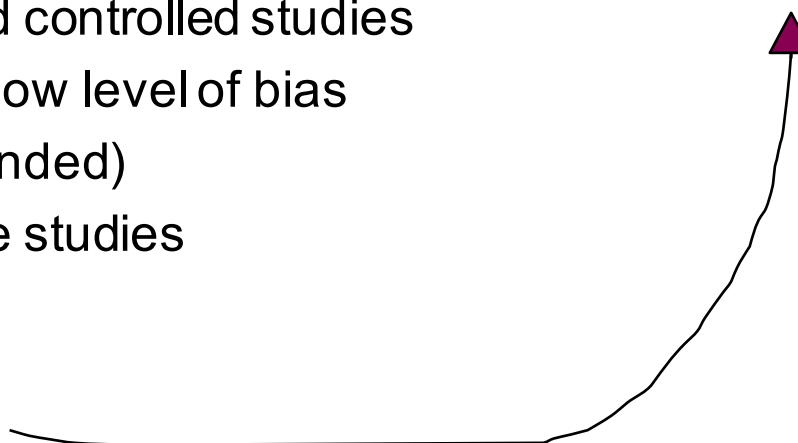
- Groups differed in several aspects
- However, nulliparous women are more likely to have complete abortions
- Results are re-assuring

Conclusion

- Immediate insertion of implants is
 - Safe,
 - Acceptable and
 - Does not lower efficacy of medical abortion
- Data is supported by
 - observational studies,
 - 2 large randomized controlled studies of high quality with low level of bias (1+ because not blinded)
 - Large retrospective studies
- Evidence Grade A

A

At least one meta analysis, systematic review or RCT rated as 1++, and directly applicable to the target population; or
A systematic review of RCTs or a body of evidence consisting principally of studies rated as 1+, directly applicable to the target population and demonstrating overall consistency of results



Recommendation for implementation of immediate insertion of implants

- It is most effective in settings where women do not come for follow up

BUT

- There is sufficient evidence to implement it in ALL settings as there are no negative consequences