Contraception after abortion

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Women undergoing an abortion are fertile
- return of ovarian function after surgical abortion
  Lähteenmäki et al., 1978
  • Rapid return of folliculogenesis & ovulation
  • ~80% of women ovulate by 6th postabortal week
  • Immediate initiation of postabortal contraception important

Postabortal contraception - when to start?

<table>
<thead>
<tr>
<th>Method</th>
<th>Surgical abortion</th>
<th>Medical abortion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hormonal contraception</td>
<td>At the time of abortion</td>
<td>At the time of abortion</td>
</tr>
<tr>
<td>Intrauterine contraception</td>
<td>At the time of abortion</td>
<td>1. At the time of follow-up</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. 1st menstruation</td>
</tr>
</tbody>
</table>

Multiple risk factors for the need of subsequent abortion

- Risk factors for repeat abortion can be recognized
  - Young age
  - Parity
  - Previous abortion (Previous second trimester abortion)
  - Regular smoking
- Contraceptive choices make a difference
  - Postponement of contraceptive initiation - risk ↑
  - Use of intrauterine contraception - risk ↓

Factors affecting real life contraceptive efficacy
Steiner et al., Ob&Gyn 1996

1. Capacity to conceive
2. Frequency & timing of intercourse
3. Degree of compliance with the method
4. Efficacy of the method
IUD/IUS reduces the need of subsequent abortion—similar results from different continents

<table>
<thead>
<tr>
<th>Authors</th>
<th>Country</th>
<th>Risk of repeat abortion</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Goodman et al</td>
<td>USA</td>
<td>HR 0.34 [0.27-0.51] IUD / IUS vs non-IUD contraception</td>
<td>Contraception 2008, 78: 145</td>
</tr>
<tr>
<td>Henriksson et al</td>
<td>Finland</td>
<td>HR 0.31 [0.16-0.67] Cu-IUD vs COC</td>
<td>Contraception 2008, 78: 149</td>
</tr>
<tr>
<td>Roberts et al</td>
<td>New Zealand</td>
<td>OR 0.3 [0.2-0.5] IUD vs COC</td>
<td>Contraception 2008, 78: 149</td>
</tr>
<tr>
<td>Ross and Lawton</td>
<td>New Zealand</td>
<td>RR 0.36 [0.17-0.77] IUCD vs OC</td>
<td>Am J Obst Gynecol 2012, 206: e1</td>
</tr>
</tbody>
</table>

Immediate postabortal insertion of intrauterine devices

Grimes et al, 2016 and Okusanya et al, 2014

- Immediate vs delayed insertion of IUD in surgical abortion—conclusions
  - Immediate insertion is safe and practical
  - Similar risk of genital infection
  - Expulsion (RR 2.9 [95%CI 1.3-6.7]) and removal (2 [1.0-4.0] rates higher following immediate postabortal insertion
  - IUD use is higher at 6 mo following immediate insertion (1.4 [1.2-1.6])

Medical abortion is taking over in many countries...

First year results of the KIEKU-study

Risk of repeat abortion in IUD vs. Control groups

<table>
<thead>
<tr>
<th></th>
<th>IUD</th>
<th>Control</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>No (%) of women with repeat abortion</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ITT-</td>
<td>6 (1.6%)</td>
<td>18 (4.4%)</td>
<td>0.012</td>
</tr>
<tr>
<td>Analysis HR</td>
<td>1.0</td>
<td>3.6 (1.2 to 10.7)</td>
<td></td>
</tr>
<tr>
<td>All unwanted pregnancies</td>
<td>9 (2.4%)</td>
<td>20 (5.4%)</td>
<td>0.038</td>
</tr>
</tbody>
</table>

- IUD provision as part of abortion service more than halved the rate of repeat abortion
- Is this cost-effective?

Efficacy of IUD/IUS contraception after medical abortion

Immediate insertion of implant is also feasible
Immediate vs. delayed insertion of the ETN-releasing contraceptive implant
Hognert et al., 2016

- Immediate (within 1h after mifepristone) vs. delayed (i.e. 2-4 weeks) insertion of the contraceptive implant after 1st trimester medical abortion

<table>
<thead>
<tr>
<th>Efficacy of medical abortion</th>
<th>Immediate (%)</th>
<th>Delayed (%)</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>% receiving the implant</td>
<td>96.5%</td>
<td>71.6%</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Implant use at 6 mo</td>
<td>77.8%</td>
<td>67.5%</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Subsequent abortion by 6 mo</td>
<td>6.8%</td>
<td>3.8%</td>
<td>0.006</td>
</tr>
</tbody>
</table>

What does the WHO say?
Recommended initiation of LARC following abortion

- WHO eligibility criteria
  - 1=use without restriction, 2=benefits outweigh risks, 3=risks outweigh benefits, 4=unacceptable health risk
- IUDs can be inserted immediately after first-trimester spontaneous or induced abortion
- Data related to surgical abortion?
- Immediate insertion following medical abortion?

Fast-track/immediate vs delayed insertion of the LNG-IUS after medical abortion

- Randomized comparison of early (≤3d (n=134)) vs delayed (2-4 weeks (n=133)) of LNG-IUS after medical abortion
- Early 1 trimester (≤9 weeks)
- Late 1 trimester + 2 trimester (≥20 weeks)
- Rate of expulsion
- Adverse events, bleeding patterns, continuation and new pregnancies up 1 year.

Cost-effectiveness of different contraceptive methods
Chiou et al., Contraception 2003; 68: 3-10

<table>
<thead>
<tr>
<th>Cost-effectiveness (% of medical abortion)</th>
<th>LNG-IUS</th>
<th>Cu-IUD</th>
<th>Injectable</th>
<th>OC</th>
<th>Spermicide</th>
<th>Fem condom</th>
<th>Cervical cap</th>
</tr>
</thead>
<tbody>
<tr>
<td>Immediate (within 1h after mifepristone)</td>
<td>96.2%</td>
<td>96%</td>
<td>n.s.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Delayed (i.e. 2-4 weeks)</td>
<td>98.9%</td>
<td>71.6%</td>
<td>&lt;0.001</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

When to start intrauterine contraception following abortion?

- IUD insertion at ~1 week after first trimester medical abortion safe (Sääv et al., 2012)
- Immediate insertion after medical abortion?

Fast-track/immediate vs delayed insertion of the LNG-IUS after medical abortion

<table>
<thead>
<tr>
<th>Rate of expulsion</th>
<th>Fast track / immediate</th>
<th>Delayed insertion</th>
<th>RR (95% CI)</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Insertion</td>
<td>95.5%</td>
<td>84.7%</td>
<td>1.13</td>
<td>(1.04-1.22)</td>
</tr>
<tr>
<td>Expulsion (total or partial) by 3 mo</td>
<td>20.7%</td>
<td>4.0%</td>
<td>5.22</td>
<td>(1.88-14.55)</td>
</tr>
<tr>
<td>Verified IUS use at 3 mo</td>
<td>72.2%</td>
<td>57.3%</td>
<td>1.28</td>
<td>(1.05-1.51)</td>
</tr>
<tr>
<td>New pregnancy by ty</td>
<td>62.6%</td>
<td>36.7%</td>
<td>1.57</td>
<td>(1.23-2.02)</td>
</tr>
<tr>
<td>New pregnancy by ty</td>
<td>4.5%</td>
<td>12.2%</td>
<td>0.37</td>
<td>(0.15-0.91)</td>
</tr>
</tbody>
</table>
Adverse events and bleeding profiles following immediate vs delayed insertion of the LNG-IUS after medical abortion

- No difference in the rates of:
  - Residual tissue: 53 vs 51.9% (RR 1.00 [0.80–1.20])
  - Early surgical abortion: 6.6 vs 6.1% (RR 1.04 [0.64–2.76])
  - Infection: 12.6 vs 8.2% (RR 1.50 [0.86–2.61])
  - Bleeding: 6.2 vs 11.9% (RR 0.52 [0.25–1.06])
  - Any problem: 21.3 vs 8.3% (RR 0.55 [0.34–1.04])
- Various parameters of the initial 90-day bleeding profiles
- Safe to be flexible in IUD provision after medical abortion

Only inserted - not planned - LARC prevents subsequent abortion
Korjamo et al., Eur J Contraception & Reprod Health Care, 2018

- Analysis of 666 women requesting TOP between Jan-May 2013
- All women had an opportunity to receive free LNG-IUS as part of RTC
  - 159 participated, 507 did not
  - Some (n=36) provided with LARC at hospital
  - Remaining women were prescribed OCs with further contraceptive provision in the primary health care
- Follow-up by means of the Finnish abortion registry
What and how you provide for postabortion contraception makes the difference!

Fast track/immediate vs delayed initiation of IUD contraception after medical abortion

Probability of
- Expulsion
- Initiation

More IUD users at 1-year after fast track/immediate insertion!

Comparison of early vs. delayed initiation of LARC methods in post-abortal contraception

<table>
<thead>
<tr>
<th></th>
<th>Early start</th>
<th>Delayed start</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compliance during follow-up</td>
<td>Optimal</td>
<td>Decreased compliance likely due to decreased uptake</td>
</tr>
<tr>
<td>Rate of repeat abortion during follow-up</td>
<td>Decreased</td>
<td>Possibly increased</td>
</tr>
<tr>
<td>Need of additional visits</td>
<td>Not needed</td>
<td>Needed</td>
</tr>
<tr>
<td>Cost-efficiency</td>
<td>Optimal</td>
<td>Decreased</td>
</tr>
</tbody>
</table>

How to optimize...?

- Focus on the most fertile...
  - Highly fertile young women need an effective method
- Include contraceptive provision (incl. LARCs) in the immediate abortion care
- Patient friendly service provision...
- Free contraception for young women & risk groups
  - Teenagers/young women, after an abortion, delivery...