

NOTE TO: Obstetrics & Gynecology Devices Panel

FROM: Colin Pollard & Diane Mitchell, M.D.
Center for Devices & Radiological Health/FDA

DATE:

SUBJECT: Background Materials for 10/4/99 Panel Meeting – Morning Session

Vaginal Barrier Contraceptive Devices

Enclosed is a set of background materials to help you prepare for the Panel deliberations on the morning of October 4th. In particular, we plan to share some early ideas with the Panel for taking a fresh look at our premarket testing requirements for vaginal barrier contraceptive devices. We will be asking the Panel to comment on this. What follows is a general overview of what we hope to accomplish in the 2-2½ hours we'll have to cover the topic.

As you've seen several times over the years, FDA periodically re-evaluates how it sets premarket testing requirements. In this case, we are looking for new and creative ways to expedite our premarket approval process for intravaginal barrier contraceptives, with the objective of making it possible to offer useful guidance to develop new devices. There are several factors influencing our desire to take a fresh look at this:

- ✓ Vaginal barrier contraceptive devices have been important for many years, and there is renewed interest because of STD epidemics.
- ✓ More than 50% of pregnancies in the U.S. each year are unintended.
- ✓ Vaginal barrier contraceptive devices inherently seem to have higher failure rates than most other contraceptive options – with 1-year "typical use" failure rates ranging as high as 40%.
- ✓ Having more and acceptable options may be more important than highly precise estimates of the failure rate, or differences in the failure rates between "perfect use" and "typical use".
- ✓ Access and user acceptability may be among the most important determinants of the true impact of a vaginal barrier contraceptive, and *post-market* follow-up (e.g., postmarket surveillance, postmarket studies, surveys, etc.) may offer the most meaningful information about effectiveness and limitations.

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The basic questions we still have to answer, in any case, are:

Safety: Do the risks of pregnancy outweigh the risks of the device?

Effectiveness: How well does the device prevent pregnancy?

Labeling: How do you convey the information on safety and effectiveness in the labeling of the device?

Many of the vaginal barrier contraceptive devices have issues with fitting, staying in place, concomitant use of spermicides, vaginal/penile discomfort, and – in general – user acceptability. Some of this is reflected in the wide variance of “perfect use” and “typical use” failure rates given in the *Uniform Contraceptive Effectiveness Table*, recommended by FDA to be included in labeling.

At the October 4th meeting, we want to express our interest in devising new and creative ways of addressing these same questions of safety and effectiveness.

In addition, we would like to consider how access (over the counter sale v. by prescription only) affects our evaluation paradigm. This will help us to provide more meaningful guidance to device developers about what we need to support OTC use.

For your review, we have gathered together articles and documents in five broad categories. We have included a sampling of articles from each category and the rest are available on request.

1. Review articles on the current state of barrier contraceptive use in the U.S.
2. Research articles on contraceptive efficacy from the published literature
3. FDA guidance documents on barrier contraceptives
4. FDA Summaries of Safety and Effectiveness for vaginal barrier contraceptive devices that we have approved in the past
5. Articles on other ways to introduce new contraceptive methods to underdeveloped nations - with the thought that these suggestions may contribute to new models for introduction into the United States.

We have also included, for reference a set of articles on condoms. This includes abstracts from two recent articles on the clinical performance of male condoms, both latex and polyurethane. The FDA guidance document on male condoms made from new materials is also included. Again, these references are available on request.

If you have any questions about the subject matter or would like to look at more of the articles please contact our clinical reviewer, Diane Mitchell, M.D., at 301-594-1180. Ext. 173.

Vaginal Barrier Contraceptive Devices

References for October 4, 1999 Panel Meeting (Morning)

(Italicized and bolded references included in package)

General Overview & Policy Paper

1. Dominik, R., Trussell, J., and Dorflinger, L., Emergency Contraceptive Use and the Evaluation of Barrier Contraceptives, Contraception, 1998; 58:379-386.
2. Fu, H., Darroch, J.E., Haas, T., and Ranjit, N., Contraceptive Failure Rates: New Estimates From the 1995 National Survey of Family Growth, Family Planning Perspectives, 1999; 31(2):56-63.
3. **Trussell, J. and Vaughan, B., *Contraceptive Failure, Method-Related Discontinuation and Resumption of Use: Results from the 1995 National Survey of Family Growth*, Family Planning Perspectives, 1999; 31(2):64-72.**

Original Research Papers

4. Archer, D.F., Mauck, C.K., Viniegra-Sibai, A., and Anderson, F.D., Lea's Shield®: A Phase I Postcoital Study of a New Contraceptive Barrier Device, Contraception, 1995; 52:167-173.
5. Bounds, W. and Guillebaud, J., Lea's Shield® contraceptive device: pilot study of its short-term patient acceptability and aspects of use, 1998.
6. Farr, G., Gabelnick, H., Sturgen, K., and Dorflinger, L., Contraceptive Efficacy and Acceptability of the Female Condom, American Journal of Public Health, 1994; 84:1960-1964.
7. **Mauck, C., et al, *Lea's Shield®: A Study of the Safety and Efficacy of a New Vaginal Barrier Contraceptive Used With and Without Spermicide*, Contraception, 1996; 53:329-335.**
8. **Trussell J, Sturgen K, Strickler J, Dominik R. *Comparative contraceptive efficacy of the female condom and other barrier methods*, Family Planning Perspective, 1994;26:66-72.**

FDA SSEDs and Current Labeling for Approved PMAs

9. *Prentif™ Cervical Cap (P870062)*
10. *Reality™ Female Condom (P910064)*

FDA Guidance Documents

11. *Premarket Testing Guidelines for Female Barrier Contraceptive Devices Also Intended to Prevent STDs (1990)*
12. *Uniform Contraceptive Labeling (1998)*

Market Launch in Developing Countries

13. Simmons, R. and Fajans, P., Contraceptive Introduction Reconsidered: A New Methodology for Policy and Program Development, Journal of Women's Health, 1999; 8(2):163-173.

Male Condoms

14. Frezieres, R.G., Walsh, T.L., Nelson, A.L., Clark, V.A., and Coulson, A.H., Evaluation of the Efficacy of a Polyurethane Condom: Results from a Randomized, Controlled Clinical Trial, Family Planning Perspectives, 1999; 31(2):81-87.
15. Frezieres, R.G., Walsh, T.L., Nelson, A.L., Clark, V.A., and Coulson, A.H., Breakage and Acceptability of a Polyurethane Condom: A Randomized, Controlled Study, Family Planning Perspectives, 1998; 30(2):73-78.
16. Testing Guidance for Male Condoms Made From New Material (1995)

Prepared by: C. Pollard – 8/16/1999; Revised: 8/23/1999, 9/1/99 (Mitchell, Harvey)

NOTE TO: Obstetrics & Gynecology Devices Panel

FROM: Colin Pollard and Diane Mitchell, M.D.
Center for Devices & Radiological Health/FDA

DATE:

SUBJECT: Background Materials for 10/4/99 Panel Meeting – Afternoon Session

New Methods for Treating Uterine Fibroids

Enclosed is a set of background materials to help you prepare for the Panel deliberations on the afternoon of October 4th. During this session, we will consider devices that can be used to treat symptomatic uterine fibroids. These *non-extirpative treatments* include but are not limited to, uterine artery embolization, and cryomyolysis. After some general presentations on these devices, we will be asking you to comment on the type of clinical studies that would be needed to support device product claims specifically for the treatment of fibroids. Many of these devices are already on the market, currently none of them have been approved for the specific claim of symptomatic uterine fibroid treatment. Among the issues we will ask you to look at are; appropriate population to treat, appropriate objectives of the study and length and type of follow-up.

We have enclosed four articles. These articles 1) review myolysis in general 2) discuss recent clinical investigations with uterine artery embolization for the treatment of uterine fibroids, and 3) discuss cryomyolysis in particular. In addition, we have a list of references that include discussions on the vascular anatomy of the fibroid as well as ACOG's position on the appropriate indications for surgically treating uterine fibroids. If you have any specific questions about the subject matter or would like copies of any of the other articles referenced, please contact Diane Mitchell, M.D. at (301) 594-1180 ext. 173.

New Methods for Treating Uterine Fibroids

References for October 4th Panel Meeting (Afternoon)

Characteristics & Evaluation of Uterine Myomata

1. ACOG Technical Bulletin: Uterine Leiomyomata. No. 192, May 1994
2. Farrer-Brown G, Beilby JOW, Tarbit MH. The vascular patterns in myomatous uteri. *J of Obst Gynaec Brit Commonwealth* 77:967-975, Nov. 1970.
3. Sampson JA. The blood supply of uterine myomata. *Surgery, Gynecology and Obstetrics* XIV: 215-234, March 1912.

Myolysis

4. **Phillips DR. Chapter 28 Laparoscopic Leiomyoma Coagulation – Myolysis In: Endoscopic Surgery for Gynecologists second edition (ed: Sutton C, Diamond MP) pp 280 – 288, WB Saunders Company Ltd. 1998.**
5. Goldfarb, H.A., Laparoscopic Coagulation of Myoma (Myolysis). *Obstet Gynecol Clin N Amer* 22:807-19, 1995
6. Chapman R. New therapeutic technique for treatment of uterine leiomyoma using laser-induced interstitial thermotherapy (LITT) by a minimally invasive method. *Lasers in Surgery and Medicine* 22:171-178, 1998.
7. Gage, AA. History of cryosurgery. *Sem Surg Onc* 14:99-109, 1998.
8. **Zreik, T.G., Rutherford, T.J., Palter, S.F., et al. Cryomyolysis, a new procedure for the conservative treatment of uterine fibroids. J Am Assoc Gynecol Laparosc 2: 175-179, 1995.**

Uterine Artery Embolization

9. Segni R, Young AT, et al. Vascular Embolotherapy Part 1. Agents, Equipment and Techniques In: *Interventional Radiology* third edition (ed: Casteneda-Zuniga W) pp 29 – 103, Williams and Wilkins 1997.
10. Goodwin SC, Vedantham S, McLucas B, Forno AE, Perrella R: Preliminary experience with uterine artery embolization for uterine fibroids. *JVIR*, 8:517-526, 1997.
11. **Bradley EA, Reidy JF, Forman RG, Jarosz J, Braude PR: Transcatheter uterine artery embolization to treat large uterine fibroids. Brit J of Obst Gynaec, 105:235-240, 1998.**
12. Worthington-Kirsch RL, Popky GL, Hutchins FL: Uterine arterial embolization for the management of leiomyoma: Quality-of-life assessment and clinical response. *Radiology*, 208:265-269, 1998.
13. **McLucas B, Goodwin SC, Kaminsky D: The embolized fibroid uterus. Min Invas Ther & Allied Technol, 7(3):267-271, 1998**
14. Pelage JP, Soyer P, Le Dref O, Dahan H, Coumbaras J, Kardache M, Rymer R. Uterine Arteries: Bilateral catheterization with a single femoral approach and a single 5-f catheter – Technical Note. *Radiology*, 1999; 210:573-575
15. McLucas B. Chapter 69 Embolization of Myomas. In: *Endoscopic Surgery for Gynecologists* second edition (ed: Sutton C, Diamond MP) pp 687 – 692, WB Saunders Company Ltd., 1998.

(Italicized and bolded references included in Panel package, others available upon request.)