Fast-Absorbing Polyglactin 910 Sutures Decrease Pain

BY JANE SALODOF MACNEIL
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SCOTTSDALE, ARIZ. — Perineal repairs involving fast-absorbing polyglactin 910 sutures resulted in less pain and earlier resumption of sexual intercourse for new mothers in a randomized, controlled trial comparing the material with standard polyglactin 910 and chromic catgut.

Patients repaired with fast-absorbing polyglactin 910 sutures consumed fewer doses of analgesia and narcotics within 36-48 hours of giving birth. Two-thirds had resumed sexual intercourse at 6 weeks, and 48% had a pain-free experience, investigator Emmanuel Bujold, M.D., said at the annual meeting of the Central Association of Obstetricians and Gynecologists.

Only 42% of women repaired with chromic catgut sutures and 56% with standard polyglactin 910 resumed intercourse at 6 weeks. Just 27% in the chromic catgut cohort and 42% in the standard polyglactin 910 group said intercourse was pain free.

"The benefits of fast-absorbing polyglactin 910 include less short-term perineal pain and probably a shorter time to resumption of pain-free sexual intercourse," said Dr. Bujold of Ste. Justine Hospital and the University of Montreal.

Dr. Bujold and coinvestigator Nathalie Leroux, M.D., also of the University of Montreal, undertook the study to see if the fast-absorbing form of polyglactin 910 could offer the benefits of a synthetic suture without the problems associated with delayed absorption of sutures.

He described suture-related discomfort as very common, with 85% of women suffering some form of perineal trauma in spontaneous vaginal birth. Medical literature reports as many as 69% require sutures, according to the investigators. Most patients suffer perineal pain after delivery, and about a fifth have long-term problems.

The study enrolled women with uncomplicated pregnancies early in labor. Those who had an uncomplicated median episiotomy or a second-degree perineal tear were randomized to sutures made with the three materials: 66 to chromic catgut, 60 to standard polyglactin 910, and 66 to fast-absorbing polyglactin 910.

The well-balanced groups contained women 30 years old on average. More than half of the standard polyglactin 910 cohort and two-thirds of the other cohorts were nulliparous. More than 40% in each group required an episiotomy. About one in four had dyspareunia before pregnancy.

Investigators used a standard analgesia protocol: 50 mg of immediate-release indomethacin and 500 mg of naproxen every 12 hours for 24 hours. As-needed doses were standardized at 500 mg of naproxen every 12 hours, 30 mg of codeine plus 325 mg of acetaminophen, and 1 mg of hydromorphone.

Nurses doing postpartum pain assessments were blinded to the sutures used. Neither pain questionnaire nor visual analog scale scores showed significant differences in evaluation of perineal pain 36-48 hours after the women had given birth.

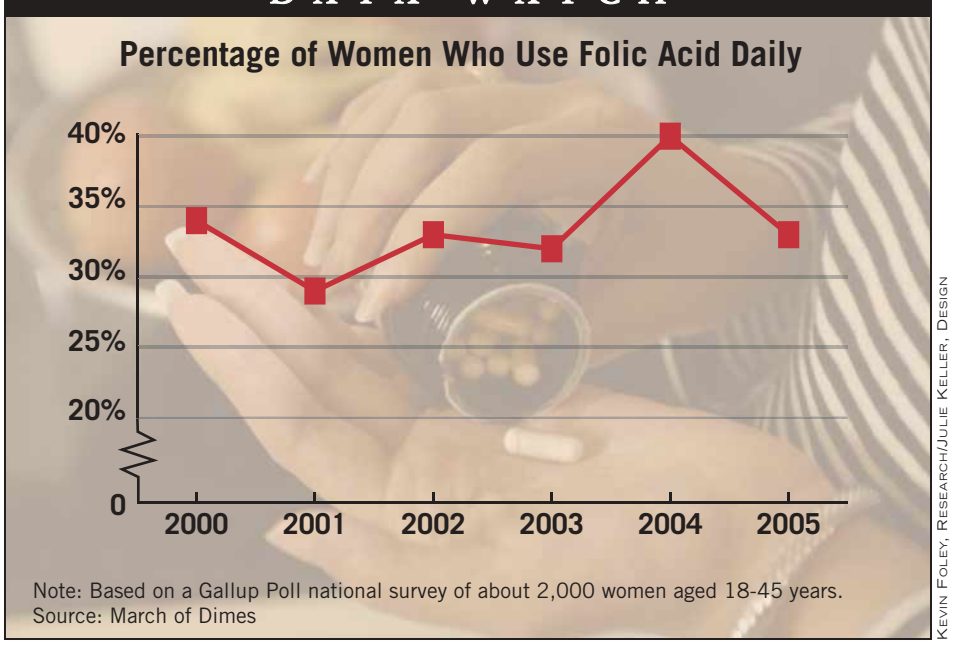
The median number of analgesic doses was seven with chromic catgut, eight with standard polyglactin 910, and six with fast-absorbing polyglactin 910. Narcotic doses averaged one with chromic catgut and two with standard polyglactin 910 but zero with fast-absorbing polyglactin 910.

At 6 weeks, the number of women for whom data were available had fallen to 53 of the women treated with chromic catgut, 43 with standard polyglactin 910, and 58 with fast-absorbing polyglactin 910.

The data on return to sexual intercourse and pain-free sexual intercourse were significant only when chromic catgut and fast-absorbing polyglactin 910 were compared. At 3 months postpartum, fast-absorbing polyglactin 910 still showed a slight advantage but it was not significant.

Stephen H. Cruikshank, M.D., of Wright State University in Dayton, Ohio, praised the investigators for "a simple but most effective study," which received the association's Central Prize Award. Dr. Cruikshank, the association's new president, said, "It just goes to show us sometimes the most effective study is the simplest." ■

DATA WATCH



Note: Based on a Gallup Poll national survey of about 2,000 women aged 18-45 years.
Source: March of Dimes

KEVIN FOLEY, RESEARCH/JULIE KELLER, DESIGN

DRUGS, PREGNANCY, AND LACTATION

GI Agents: Part I

Gastrointestinal complaints are common in pregnancy and the postpartum period. They include conditions such as nausea and vomiting, constipation, diarrhea, heartburn, and erosive gastroesophageal reflux disease, which may be treated with the following products:

Antiemetics. Nausea and vomiting is the most frequent GI complaint in pregnancy. A wide range of oral and parenteral antiemetics is available to treat nausea and vomiting of pregnancy (NVP). All are considered low risk for developmental toxicity (growth retardation, structural defects, functional and behavioral deficits, or death). The most commonly prescribed over-the-counter agent for this condition is doxylamine (Unisom), usually combined with vitamin B_6 (pyridoxine). These two drugs were the components of Bendectin, which was removed from the market by its manufacturer in 1983, but classified by the Food and Drug Administration as safe and effective. Other common oral medications for NVP include prochlorperazine (Compazine), metoclopramide (Reglan), trimethobenzamide (Tigan), promethazine (Phenergan), and ondansetron (Zofran).

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Hyperemesis gravidarum, requires intravenous antiemetics, such as droperidol (Inapsine), prochlorperazine, and ondansetron.

Laxatives. There are seven types of products that act as laxatives: saline (phosphates and magnesium hydroxide and its salts), stimulants/irritants (cascara, bisacodyl, casanthranol, senna, and castor oil), bulking agents (methylcellulose, polycarbophil, and psyllium), emollient (mineral oil), fecal softeners (docusate), hyperosmotics (glycerin, lactulose), and tegaserod (Zelnorm).

With the exception of lactulose and tegaserod, these products are available over the counter. Most do not cause direct embryo/fetal toxicity. However, castor oil, which is converted to ricinoleic acid in the gut, is an irritant that may induce premature labor. Improper use of saline laxatives can cause electrolyte imbalances, and mineral oil will prevent absorption of fat-soluble vitamins.

Of the laxatives, bulking agents and fecal softeners are the best in pregnancy. Cascara sagrada and senna are excreted into breast milk and are compatible with breast-feeding, although they may cause diarrhea in a nursing infant.

Tesgaserod, a serotonin type-4 receptor agonist, is approved for women with irritable bowel syndrome whose primary bowel symptom is constipation (and for idiopathic constipation in those under age 65). Limited animal and human data suggest a low risk for embryo/fetal toxicity.

Antidiarrheal agents. The antidiarrheal agents diphenoxylate and its active metabolite, difenoxin, are meperidine-related narcotics. Available as Lomotil and Motofen when combined with atropine to prevent abuse, they present low risk in pregnancy. Although there is potential for toxicity in a nursing infant, infrequent use is probably compatible with nursing. Loperamide (Imodium) is low risk in pregnancy and lactation. Alosetron (Lotronex), a serotonin antagonist, has both antiemetic and antidiarrheal properties. It is indicated only in women with IBS whose primary symptom is severe, chronic diarrhea. Based only on animal data, it is considered low risk in pregnancy. Because severe GI toxicity has been reported in adults, it should be avoided during lactation. Bismuth subsalicylate, such as Pepto-Bismol and Kaopectate, should not be used in pregnancy or lactation since metabolism releases salicylate.

Antacids. Types to treat heartburn include calcium carbonate, magnesium hydroxide and oxide, and aluminum hydroxide and carbonate. Since systemic absorption of antacids is negligible, recommended doses are safe in pregnancy and lactation. Sodium bicarbonate should be avoided because it is absorbed systemically and could cause alkalosis.

Antisecretory agents. These agents, used for heartburn and GERD, include the histamine H_2 antagonists cimetidine (Tagamet), famotidine (Pepcid), nizatidine (Axid), and ranitidine (Zantac) and the proton pump inhibitors esomeprazole (Nexium), lansoprazole (Prevacid), omeprazole (Prilosec), pantoprazole (Protonix), and rabeprazole (Aciphex).

Low strengths of the histamine antagonists are available over the counter, but omeprazole is the only PPI that is available without a prescription. All of these antisecretory agents are low risk in pregnancy. The histamine antagonists are also compatible with breast-feeding. In contrast, the PPIs have carcinogenic and mutagenic properties, so prolonged use during lactation should be avoided.

Misoprostol (Cytotec), another antisecretory agent and a prostaglandin E_1 (PGE_1) analogue, is a proven human teratogen. It should only be used in pregnancy for its off-label indications: uterine stimulation and cervical ripening. ■

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