

# Manual Placenta Removal May Not Up Blood Loss

BY PATRICE WENDLING

Chicago Bureau

DALLAS — Manual removal of the placenta during cesarean delivery did not significantly increase maternal blood loss when compared with spontaneous removal in a prospective, randomized controlled trial of 86 women.

The study's primary outcome of change in hematocrit was not significantly different between the 40 women whose placenta

was delivered manually and the 46 women whose placenta was delivered spontaneously (4.4% vs. 4.9%). Mean pre- and postoperative hematocrit levels were 35% and 31% versus 35% and 30%, Dr. Shawana Swann reported at the annual meeting of the Society for Maternal-Fetal Medicine.

In addition, there was no difference in the percentage of patients with a drop in hematocrit of greater than 3% (28% vs. 35%) or greater than 5% (15% vs. 17%), said Dr. Swann of the Medical University

of South Carolina in Charleston. None of the women in the study developed endometritis or received blood transfusions during hospitalization.

Placental delivery time was shorter in the manual group with a mean time of 49 seconds versus 71 seconds in the spontaneous group. This was statistically significant, but not clinically significant, as the difference was just 22 seconds, said Dr. Swann, who presented the results on behalf of principal investigator Dr. Eva Press-

man of the University of Rochester (N.Y.) and their associates.

The manual and spontaneous groups were similar in terms of age (32 vs. 31 years), parity (1), and median gestational age (39 weeks).

"We believe providers should not base the mode of placental delivery on blood loss considerations for scheduled cesarean deliveries," Dr. Swann said.

Proponents of manual removal suggest that faster placental removal leads to more rapid closure of the uterine incision and therefore less bleeding from this site.

Those preferring spontaneous separation and controlled cord traction contend that allowing dilated sinuses in the uterine wall to contract prior to placental expulsion decreases bleeding from the placental bed, and that this method is associated with lower rates of infection, she said.

An audience member asked why the findings were different from those of more than a dozen previous trials comparing the two methods of placental removal, including a recent meta-analysis of six randomized trials involving more than 1,700 women (Am. J. Obstet. Gynecol. 2005;193:1607-17).

The investigators who conducted the meta-analysis had reported that a benefit for spontaneous removal was usually found in the few studies that recorded blood loss or changes in hemoglobin/hematocrit level. They concluded that spontaneous removal should be preferred to manual removal, given the significant decrease in endometritis (odds ratio 0.62) demonstrated in the five studies that reported this outcome.

Dr. Swann responded that most studies performed prior to 2002 used estimated blood loss rather than hematocrit levels as the outcomes measure. Limitations of the current study, she said, included not collecting data on body mass index, which may affect blood loss and rates of infection, and the fact that hematocrit levels can be affected by administration of intravenous fluid and extravascular fluid shifts during cesarean delivery.

The study was sponsored by the Medical University of South Carolina and the University of Rochester.

Dr. Swann did not disclose any relevant financial conflicts of interest. ■

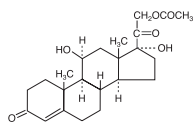
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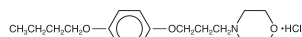
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Topical corticosteroids are anti-inflammatory and anti-pruritic agents. The structural formula, the chemical name, molecular formula and molecular weight for active ingredients are presented below.



hydrocortisone acetate  
Pregn-4-ene-3,20-dione, 21-(acetyloxy)-11,  
17-dihydroxy-, (11-beta)-  
C<sub>23</sub>H<sub>32</sub>O<sub>6</sub>; mol. wt. 404.50



pramoxine hydrochloride  
4-(3-(p-butoxyphenoxy)propyl)morpholine  
hydrochloride  
C<sub>17</sub>H<sub>27</sub>NO<sub>3</sub>·HCl; mol. wt. 329.87

**CLINICAL PHARMACOLOGY:** Topical corticosteroids share anti-inflammatory, anti-pruritic and vasoconstrictive actions.

The mechanism of anti-inflammatory activity of topical corticosteroids is unclear. Various laboratory methods, including vasoconstrictor assays, are used to compare and predict potencies and/or clinical efficacies of the topical corticosteroids. There is some evidence to suggest that a recognizable correlation exists between vasoconstrictor potency and therapeutic efficacy in man.

Pramoxine hydrochloride is a topical anesthetic agent which provides temporary relief from itching and pain. It acts by stabilizing the neuronal membrane of nerve endings with which it comes into contact.

**Pharmacokinetics:** The extent of percutaneous absorption of topical corticosteroids is determined by many factors including the vehicle, the integrity of the epidermal barrier, and the use of occlusive dressings.

Topical corticosteroids can be absorbed from normal intact skin. Inflammation and/or other disease processes in the skin increase percutaneous absorption. Occlusive dressings substantially increase the percutaneous absorption of topical corticosteroids. Thus, occlusive dressings may be a valuable therapeutic adjunct for treatment of resistant dermatoses. (See DOSAGE AND ADMINISTRATION.)

Once absorbed through the skin, topical corticosteroids are handled through pharmacokinetic pathways similar to systemically administered corticosteroids. Corticosteroids are bound to plasma proteins in varying degrees. Corticosteroids are metabolized primarily in the liver and are then excreted by the kidneys. Some of the topical corticosteroids and their metabolites are also excreted into the bile.

**INDICATIONS AND USAGE:** Topical corticosteroids are indicated for the relief of the inflammatory and pruritic manifestations of corticosteroid-responsive dermatoses.

**CONTRAINDICATIONS:** Topical corticosteroids are contraindicated in those patients with a history of hypersensitivity to any of the components of the preparation.

**PRECAUTIONS: General:** Systemic absorption of topical corticosteroids has produced reversible hypothalamic-pituitary-adrenal (HPA) axis suppression, manifestations of Cushing's syndrome, hyperglycemia, and glucosuria in some patients. Conditions which augment systemic absorption include the application of the more potent steroids, use over large surface areas, prolonged use, and the addition of occlusive dressings.

Therefore, patients receiving a large dose of a potent topical steroid applied to a large surface area and under an occlusive dressing should be evaluated periodically for evidence of HPA axis suppression by using the urinary free cortisol and ACTH stimulation tests. If HPA axis suppression is noted, an attempt should be made to withdraw the drug, to reduce the frequency of application, or to substitute a less potent steroid.

Recovery of HPA axis function is generally prompt and complete upon discontinuation of the drug. Infrequently, signs and symptoms of steroid withdrawal may occur, requiring supplemental systemic corticosteroids. Children may absorb proportionally larger amounts of topical corticosteroids and thus be more susceptible to systemic toxicity. (See Precautions-Pediatric Use.)

If irritation develops, topical corticosteroids should be discontinued and appropriate therapy instituted.

In the presence of dermatological infections, the use of an appropriate antifungal or antibacterial agent should be instituted. If a favorable response does not occur promptly the corticosteroid should be discontinued until the infection has been adequately controlled.

**Information for the Patient:** Patients using topical corticosteroids should receive the following information and instructions:

1. This medication is to be used as directed by the physician. It is for external use only. Avoid contact with the eyes.
2. Patients should be advised not to use this medication for any disorder other than for which it was prescribed.
3. The treated skin area should not be bandaged or otherwise covered or wrapped as to be occlusive unless directed by the physician.
4. Patients should report any signs of local adverse reactions especially under occlusive dressings.
5. Parents of pediatric patients should be advised not to use tight-fitting diapers or plastic pants on a child being treated in the diaper area, as these garments may constitute occlusive dressings.

**Laboratory Tests:** The following tests may be helpful in evaluating the HPA axis suppression:  
Urinary free cortisol test  
ACTH stimulation test

**Carcinogenesis, Mutagenesis, and Impairment of Fertility:** Long-term animal studies have not been performed to evaluate the carcinogenic potential or the effect on fertility of topical corticosteroids. Studies to determine mutagenicity with prednisolone and hydrocortisone have revealed negative results.

**Pregnancy: Teratogenic Effects: Pregnancy Category C:** Corticosteroids are generally teratogenic in laboratory animals when administered systemically at relatively low dosage levels. The more potent corticosteroids have been shown to be teratogenic after dermal application in laboratory animals. There are no adequate and well-controlled studies in pregnant women on teratogenic effects from topically applied corticosteroids. Therefore, topical corticosteroids should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus. Drugs of this class should not be used extensively on pregnant patients, in large amounts, or for prolonged periods of time.

**Nursing Mothers:** It is not known whether topical administration of corticosteroids could result in sufficient systemic absorption to produce detectable amounts in breast milk. Systemically administered corticosteroids are secreted into breast milk in quantities NOT likely to have a deleterious effect on the infant. Nevertheless, caution should be exercised when topical corticosteroids are administered to a nursing woman.

**Pediatric Use:** Pediatric patients may demonstrate greater susceptibility to topical corticosteroid induced HPA axis suppression and Cushing's syndrome than mature patients because of a larger skin surface area to body weight ratio.

Hypothalamic-pituitary-adrenal (HPA) axis suppression, Cushing's syndrome, and intracranial hypertension have been reported in children receiving topical corticosteroids. Manifestations of adrenal suppression in children include linear growth retardation, delayed weight gain, low plasma cortisol levels, and absence of response to ACTH stimulation. Manifestations of intracranial hypertension include bulging fontanelles, headaches, and bilateral papilledema.

Administration of topical corticosteroids to children should be limited to the least amount compatible with an effective therapeutic regimen. Chronic corticosteroid therapy may interfere with the growth and development of children.

**ADVERSE REACTIONS:** The following local adverse reactions are reported infrequently with topical corticosteroids, but may occur more frequently with the use of occlusive dressings. These reactions are listed in an approximate decreasing order of occurrence:

Burning	Hypertrichosis	Maceration of the skin
Itching	Acneiform eruptions	Secondary infection
Irritation	Hypopigmentation	Skin atrophy
Dryness	Perioral dermatitis	Striae
Folliculitis	Allergic contact dermatitis	Miliaria

**OVERDOSAGE:** Topically applied corticosteroids can be absorbed in sufficient amounts to produce systemic effects. (See PRECAUTIONS.)

**DOSAGE AND ADMINISTRATION:** Topical corticosteroids are generally applied to the affected area as a thin film three to four times daily depending on the severity of the condition. Occlusive dressings may be used for the management of psoriasis or recalcitrant conditions. If an infection develops, the use of occlusive dressings should be discontinued and appropriate antimicrobial therapy instituted.

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