

## **Therapeutic efficacy and mechanism of action of ethamsylate, a long-standing hemostatic agent.**

[Garay RP](#), [Chiavaroli C](#), [Hannaert P](#).

Equipe d'Accueil EA2381, LPTIM, Case 7124, Tour 54/5, Université Paris 7, Paris, France. garayperso@aol.com

Ethamsylate (2,5-dihydroxy-benzene-sulfonate diethylammonium salt) is a synthetic hemostatic drug indicated in cases of capillary bleeding. This review covers more than 40 years of intensive clinical and fundamental research with ethamsylate. First, we summarize the large medical literature concerning its clinical efficacy. Of these, well-controlled clinical trials clearly showed the therapeutic efficacy of ethamsylate in dysfunctional uterine bleeding, with the magnitude of blood-loss reduction being directly proportional to the severity of the menorrhagia. Other well-controlled clinical trials showed therapeutic efficacy of ethamsylate in periventricular hemorrhage in very low birth weight babies and surgical or postsurgical capillary bleeding. Second, we review the numerous investigations performed to elucidate the mechanism of action of ethamsylate. Ethamsylate acts on the first step of hemostasis by improving platelet adhesiveness and restoring capillary resistance. Recent studies showed that ethamsylate promotes P-selectin-dependent, platelet adhesive mechanisms. Finally, we compare ethamsylate with other recent hemostatic agents. It is suggested that the place of ethamsylate as a hemostatic agent is that of a mild but well-tolerated drug, particularly useful in dysfunctional uterine bleeding when contraception is not needed.