

PREMATURE BIRTH PROPHYLAXIS BY USING PARTUSISTEN AND ETHANOL

D. Arnaudov, M. Yakov

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The diminution of premature births is an important reserve for lowering of perinatal infant mortality and morbidity as well for increasing of birth-rate. The drugs which cease uterine contractions are of great importance in this relation. B₂ mimetics have a very successful clinical use but they are imported, quite expensive and not always available.

The aim of the present work is to study the action of B₂ adrenomimetic Partusisten (P) and of Ethanol (E) in order to reduce premature births and to compare these results. Our purpose is to delay delivery at least by 48 hours which are necessary for corticosteroid prevention of the respiratory distress syndrome by using P and E.

Material and methods

The comparative investigations covered 180 women in childbirth in which one of the following signs of starting parturition was present: amniorrhexis, presence of uterine contraction, opening of 3—4 cm.

P treated group consisted of 94 women and E one of 86 ones. P was injected from amp. a 0,5 mg 10 ml into bank with glucose solution. An i. v. infusion was made with a speed of 1—3 mcg/min corresponding to 20—60 droplets/min. An attention is paid to prevent any cardiovascular and respiratory complaints. E was diluted in ratio: 100 ml 96 % purified E to 2 banks with 500 ml 5 % glucose solution each after beforehand drawing out of 50 ml from each bank. It resulted in E concentration of 9,6 %. The treatment started with so-called high dose — a total amount of 7,5 ml/kg b. w. 9,6 % E was infused for 1 h. After that E was slowly dropwise infused in order to prevent labour renewal. After infusion stopping the treatment was continued by using smasmolytics and P in tablets in both groups.

The delay of already started delivery at least with 48 hours presents a criterion for successful therapy. According to the effect of both tocomimetics each group is divided into two subgroups: Ist with delay of birth with more than 48 h and IInd without such a success.

Results and discussion

The data related with obstetric state immediately before starting the tocolysis are presented on table 1. The distribution of pregnant women according to gestation age and to success of tocolysis is shown on table 2.

Four new-borns born less that 12 hours after E tocolysis cessation showed some symptoms of C. N. S. suppression which were already absent on the next day. There were no still-born babies in both groups. No infant's morbidity related with tocolysis was established. Till the 7th day 8 new-borns have died which is 16 % peri-

Table 1

	Partusisten		Ethanol	
	delayed birth	failed delay	delayed birth	failed delay
Dilation (cm)	2,0	3,2	2,7	3,6
Collum shortening	50 %	82 %	65 %	85 %
Amnion rupture	10 %	28 %	18 %	29 %
Interval between uterine contractions	7,2 min	4 min	6,3 min	3,5 min
Duration of uterine contractions	25 sec	34 sec	28 sec	39 sec
multipara	80 %	66 %	50 %	63 %
Average gestation age	33	34,7	32	34

Table 2

	Partusisten		Ethanol	
	delayed birth	failed delay	delayed birth	failed delay
28—30 gest. week	15	13	16	22
31—33 gest. week	16	26	22	18
34—37 gest. week	8	16	6	12
body weight of baby	1870	1990	1830	1970
Apgar on 1 min	7,7	7,6	7,0	7,0
Apgar on 3 min	8,1	8,0	7,8	7,5
Apgar on 5 min	8,4	8,2	8,2	7,8

natal infant's mortality concerning premature infants who were treated with E 48 h and given prophylactically corticosteroids. 14 new-borns have died which is 33 % perinatal infant's mortality concerning births without E tocolysis. This fact is important bearing in mind that these babies are on the average more mature by a fortnight and heavier by 120 g. After P tocolysis till the 7th day 3 new-born babies have died of each group.

We ascertained some complications during labour guidance in 2 women with retained placental portion and following instrumental revision of the uterus. The babies born till the 12 hours after E infusion cessation showed also certain complications such as suppressed reflexes and hypotonia which soon disappeared.

The post-partum period was regular and without any complications in both groups. There were no signs of C. N. S. damage in catamnistically followed-up infants.

The side-effects are demonstrated on table 3.

Based on these results one must not use E tocolysis in cases of diabetes, liver diseases, severe cardiovascular and renal diseases. Nausea and vomiting can be successfully avoided by atropin and droperidol. P is contraindicated in pregnant women with cardiovascular insufficiency, diabetes, cardiotonic therapy and application of diuretics causing an increase of calcium loss.

We can conclude that although not one of both drugs answers completely the requirements as a tocolytic we accept that they could be applied in contemporary obstetrics. We prefer one of them depending on concrete conditions. They must not be applied in pregnancy and labour complicated with preeclampsia

Table 3

	Partusisten	Ethanol
Mother	tachycardia, hypotension, hypokaliemia, hyperlipidemia, bronchospasm	nausea, vomiting, restlessness, hypoglycemia, lactacidemia, tachycardia, risk of breathing suppression
Foetus	cardiotoxicity, acute cardiovascular insufficiency	C. N. S. suppression, respiratory disturbances, hypotonia

and even eclampsia, prematurely placenta separation, placenta previa, and chorionamnionitis. E tocolysis must be discontinued at least 12 hours before labour onset.

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ПРЕДУПРЕЖДЕНИЕ ПРЕЖДЕВРЕМЕННЫХ РОДОВ ПАРТУСИСТЕНОМ И ЭТАНОЛОМ

Д. Арnaudов, Яков

РЕЗЮМЕ

Авторы сообщают результаты сравнения и параллельно проведенного лечения с целью купирования преждевременно появившейся родовой деятельности 180 женщин. В 94 случаях был применен партусистен, а в 86 — этанол. Устанавливаются критерии начавшейся родовой деятельности.

Полученные результаты позволяют сделать вывод, что при начавшейся родовой деятельности можно рассчитывать на успех лишь в одной трети всех случаев. Обсуждается влияние токолиза на плод, на материнский организм и его отношение в перинатальной детской смертности, а также и протекание родов при неуспешном токолизе. Приводятся противопоказания и описываются побочные явления.