ANTIBACTERIAL THERAPY FOR PRETERMARY AND ANTENATURE RURUSION OF AMBITIONAL FLUID

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Premature birth and DIOV are one of the pressing and controversial problems in obstetrics. On the one hand, prolongation of premature pregnancy increases the gestational age of the fetus, on the other hand, the risk of infectious complications in the fetus due to severe oligohydramnios, as well as in the mother, increases with the subsequent development of chorioamnionitis (CA) and septic conditions.

Keywords: prematurity , antibacterial therapy, anhydrous period.

Premature birth determines one of the main indicators of a country's civilization and infant mortality. The frequency of premature births does not have a steady downward trend and is 5–9% in developed countries, and up to 12% in the Russian Federation. In Moscow, this figure does not exceed 7%, and, nevertheless, premature babies continue to occupy first place in the structure of morbidity and mortality [1]. Premature rupture of amniotic fluid is a common obstetric pathology, occurring in 8–19% of cases with timely and in 25–54% of cases with premature births [2]. Premature rupture of the membranes inevitably leads to the development of labor within several days. The most controversial issue in premature pregnancy with antepartum rupture of amniotic fluid (APLI) is the issue of prolonging the anhydrous period. Purpose of the study: to evaluate the effectiveness of antibacterial therapy for preterm birth and DIOV. Material and research methods. 116 pregnant women with preterm birth and DIOV were examined. All examined patients with DIOV were divided into 4 groups: main group A and B and control group C and D (depending on the duration of PD: A and C from 24 hours to 7 days, B and D more than 7 days). Depending on the gestational age , pregnant women are divided into 2 subgroups (I - terms from 28 to 30 (+ 6 days), II - from 31 to 34 weeks). In the main group, 59 pregnant women were examined, in the control group – 57.

All pregnant women were prescribed preventive antibiotic therapy immediately after taking the first culture: in the control group - ampicillin (semi-synthetic penicillin) 4 g/day for 5 days in combination with eubiotics . In the main group, amoxiclav 1.2 g per 200 ml of physiological solution was prescribed intravenously 2 times a day for 5 days in combination with eubiotics . Protected penicillins, unlike semisynthetic ones, prevent the destruction of the antibiotic by β- lactamase . Considering the fact that the results of the first culture are received no earlier than the fourth day and if the

prophylactic course of antibiotics is insufficiently effective, time may be lost for the prevention of purulent-septic infection in the mother and fetus. Five days later (upon receipt of culture results), a second course of antibiotic therapy was prescribed, in accordance with the results obtained. Research results and discussion. The average age of pregnant women in the main and control groups did not differ significantly and was 28.9 ± 0.49 years (from 16 to 43 years) in the main group and 28.7 ± 0.52 (from 16 to 41 years) in the control group. An analysis of extragenital morbidity showed that the leading position in the structure of somatic diseases was occupied by respiratory diseases - in almost every fourth. Diseases of the urinary system were significantly more common among pregnant women in the main group - almost every fourth (23.7%), while in the control group every sixth suffered from these diseases. Obesity was diagnosed in every fifth or sixth person examined; no statistically significant differences were found between the groups. Varicose veins were noted in 12 pregnant women (10.3%). Some pregnant women registered the presence of two or more extragenital diseases: n = 16 (13.8%), no significant differences between groups were found. The average gestational age at the time of rupture of water in the study and control groups had minimal differences, which was a necessary condition when comparing perinatal outcomes. The vast majority of pregnant women with prematurity and DIOV gave birth spontaneously. Abdominal delivery by cesarean section was performed in 24 pregnant women (20.7%). In the main group, abdominal delivery by cesarean section occurred in every fifth of those examined with prematurity and DIOV - 12 (20.3%), and in the control group - in every fourth - 15 (26.3%), which was not statistically significant. difference. All pregnant women with suspected DIOV immediately upon admission underwent collection of vaginal and cervical canal discharge for bacteriological examination and determination of sensitivity to antibiotics (first culture). The data from this culture are very important, since after a prophylactic course of antibiotics, subsequent cultures are expectedly uninformative for determining the microbiological landscape of the vaginal flora. Of the 116 patients we examined with DIOV and prematurity, normocenosis of the genital tract was diagnosed in only every fifth (21.5%). The vast majority of those examined were diagnosed with bacterial vaginosis and vaginitis. Every second person with DIOV and prematurity was diagnosed with vaginitis, and more than every fourth was diagnosed with bacterial vaginosis. The growth of microorganisms was observed in 35 (30.2%) pregnant women out of 116 examined. Most often these were enterobacteria (mainly Escherichia coli), 11.9–14.0%, in equal proportions, Staphylococcus epidermidis and β-hemolytic streptococcus (most often Enterococcus) were sown. Among pregnant women with normocenosis, lactobacilli and epidermal staphylococci were significantly more often found from facultative anaerobes, and only Escherichia coli and Klebsiella were isolated from gram-negative bacteria (4.7%). With bacterial vaginosis, a different

situation was observed - microorganisms of intestinal origin significantly predominated against the background of a significant decrease in the frequency of lactobacilli isolation. In case of vaginitis, in all cases, associations of microorganisms were sown, represented by 2–5 species with an equal or predominant aerobic component. Representatives of the Enterobacteriaceae family (Escherichia coli, Enterobacteriaceae, Klebsiella) predominated mainly. However, ß-hemolytic streptococcus was sown together with them. Determination of the sensitivity of isolated microorganisms to antibacterial drugs showed that ampicillin does not have the necessary effect on enterobacteria, therefore its prescription as preventive antibiotic therapy in the presence of this microflora is pathogenetically not justified and ineffective (Table 1). In cases of detection of gram-positive flora, the antibiogram showed a complete lack of effect of ampicillin on Staphylococcus epidermidis. When acting on β-hemolytic streptococcus, the effects of ampicillin and amoxiclav are approximately equivalent. Low sensitivity of enterococcus to all types of antibiotics was noted, except for vancomycin, tienam and meronem.

An assessment of the comparative effectiveness of preventive antibiotic therapy (based on sensitivity results) in the main and control groups showed that for preventive antibiotic therapy, ampicillin is absolutely ineffective in the presence of Enterobacter and Staphylococcus epidermidis (0%) and has low effectiveness (10.7%) in the presence of Escherichia coli (Table .2). Amoxiclav is sensitive in detecting these microorganisms in 70–91% of cases. For β-hemolytic streptococci, the effects of amoxiclav and ampicillin are approximately the same (66–71%). In the presence of enterococcus, both drugs are not effective enough (48–65%). A study of infectious complications in pregnant women, parturients and postpartum women showed that the frequency of CA significantly increases with increasing duration of PD. Thus, in the main group, in pregnant women with a PD duration of up to 7 days, the frequency of CA was 8.4%, and with a PD duration of more than 7 days, it significantly increased by 2.2 times, that is, it was diagnosed in almost every fifth.

Table 1

Sensitivity To antibiotics enterobacteria (first sowing)

Antibiotics		**Intestinal wand**	**Enterobacter**	**Klebsiella**
Ampicillin		10.7%	0%	29.0%
Amoxiclav		88.0%	91.0%	69.0%
Cephalospor	I generations (cefazolin)	87.6%	100%	69.0%
	II generations (cephalosporin) _ _	100%	100%	68.0%

	III generations (cefatac - sim)	100%	100%	100%
	IV generations (cefipime)	100%	100%	100%
Erythromycin		17.0%	0%	0%
Furagin		11.0%	0%	0%
Vancomycin (glycopeptide)		100%	100%	100%
Tienam , meronem (carbopemens)		100%	100%	100%

Table 2

Comparative analysis efficiency antibiotic therapy

Microorganisms	**Groups**	
	Main (amoxiclav)	**Control (ampicillin)**
Enterobacteriaceae	87.0%	13.4% *
Intestinal wand	88.0%	10.7% *
Enterobacter	91.0%	0% *
Klebsiella	69.0%	29.0%
Epidermal staphylococcus	70.0%	0% *
β- hemolytic strepto - cocc :	66.0%	71.0%
St. haemolyt .	100%	65.0%
St. agalactiae	100%	100%
Enterococcus	48.0%*	65.0%

Note: * – reliability differences between groups (R < 0.05).

Table 3

Quantity infectious complications V groups

Complications	**Main group**				**Control group**			
	A (< 7 days .)		**B (> 7 days .)**		**C (< 7 days .)**		**D (> 7 days).**	
	n	**%**	**n**	**%**	**n**	**%**	**n**	**%**
HA clinical	3	5 *	2	3.4	4	7 *	2	3.5

HA histological	7	12	3	5	9	15.9 *	5	8.8 *
Endometritis	1	1.7	0	0	1	1.8	0	0
Total	eleven	18.6 *	5	8.4 *	14	24.6 *	7	12.3 *

Note: * – reliability differences between groups (R < 0.05).

A similar situation was observed in the control group. Thus, in pregnant women with a duration of PD up to 7 days, the frequency of CA was 12.3% (in every eighth), with an increase in the duration of PD over 7 days, the frequency of CA significantly increased - 2 times (diagnosed in every fourth). Noteworthy is the statistically significant increase in the frequency of CA after the results of histological examination of the fetal membranes and placenta, which indicates that in three quarters of all histologically verified CA there are no clinical manifestations. An assessment of the influence of the nature of the antibiotic therapy on the incidence of CA and endometritis showed that, in general, this therapy does not significantly reduce their frequency, but is largely determined by the duration of PD. In general, the study showed that for prophylactic antibiotic therapy, ampicillin is absolutely ineffective in the presence of Enterobacter and Staphylococcus epidermidis (0%) and has low effectiveness (10.7%) in the presence of Escherichia coli. Amoxiclav is sensitive in detecting these microorganisms in 70.0–1.0% of cases. With regard to β-hemolytic streptococci, the effects of amoxiclav and ampicillin are approximately the same (66.0–1.0%). In the presence of enterococcus, both drugs are not effective enough (48.0–5.0%). Carrying out preventive antibiotic therapy, taking into account the sensitivity of the cervicovaginal microflora, can significantly increase PD, but does not affect the frequency of intrauterine infection. Obviously, this circumstance is due to the fact that the growth of pathological microflora occurs only in every third mother (33.3%) whose newborn has purulent-septic complications.

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