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PHYSICIANS' PREFERENCES FOR CONSTIPATION PREVENTION AND TREATMENT IN PREGNANT WOMEN: THE COMPARISON WITHIN THE RUSSIAN FEDERATION

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Abstract:

Intestinal pathologies in pregnant women are understudied. Meanwhile, constipation can cause serious complications which put mother's and child's health in jeopardy. Chronic constipation and its negative consequences are closely related to the microbial flora of the gastrointestinal tract. Constipation treatment in pregnant women is a major problem since most common laxatives have significant side effects and are contraindicated in pregnancy. These data suggest further studying of constipation negative effects on gestation course and partus as well as new safe drugs development to tackle this issue. What is more, both obstetrician-gynecologists and physicians face this problem. Therefore, these specialties were chosen as the main groups for comparison in our article. All mentioned above served as a prerequisite for study conduction and predetermined work objectives. Practical physicians' preferences in pharmacologic management and prevention of constipation in pregnant women are considered in the article. The main drawbacks in patient management tactics were identified, and the major preferred drugs in patient's treatment were revealed. The doctors' knowledge in subject area was assessed according to clinical recommendations, the results were analyzed. The obtained results were compared with the results of the All-Russian Pharmacoepidemiological Study, 2d stage – "The Epidemiology of Drugs Use in Pregnant Women" (February-April, 2015).

Key words: *pregnancy, constipation, laxatives.*

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INTRODUCTION:

According to the foreign sources, constipation affects from 11 to 44% of womenduring pregnancy [1]. Russian studies suggest that up to 66.8% of pregnant women suffer from constipation [2] - the most frequent gastrointestinal tract pathology.Predisposition to constipation during pregnancy is evoked by physiological and anatomical changes in the woman's body. The increased level of progesterone and its metabolites, whichactivate inhibitory gastrointestinal hormone and suppress the activity of substances stimulating peristalsis (gastrin, cholecystokinin, enkephalins, substance P),leads to a decrease in the tone of smooth muscles, including musculature of the large intestine. A decrease inmobility during pregnancy, use of iron- and (or) calcium-containing drugs, antispasmodicset alias couldcause problems associated with normal defecation [3, 4]. In the late stages ofpregnancy, passage of feces is also hampered by squeezing the intestine with an enlarged alvus. Constipation during pregnancy causes disturbances in large intestine biocenosis, which leads to the violation of cervical canal biocenosisand, in turn, cause the ascending infection of the fetus and the development of various complications during gestational period [3, 5]. At the moment, there is an active search for innovative molecules [1, 2] in this, their study is performed on pharmacological targets [3, 4], in vivo models [5, 6], pharmacokinetic parameters [7, 8] and clinical studies [9, 10].

The high level of constipation prevalencein pregnant women and the variety of patient management tactics are essential drivers for the conduction of a pharmacoepidemiological study.

OBJECTIVE:

To determine the preferences of OGs and GPs in Belgorod and the Belgorod region inconstipation treatment in pregnant women and (2) to compare the obtained data with the results of the all-Russian research [11].

MATERIALS AND METHODS:

The anonymous questioning was held through the second stage of the all-Russian pharmacoepidemiological study called 'The Epidemiology of Drugs Use in Pregnant Women'. During the study 1066 questionnaires were analyzed including 734 questionnaires of OGs and 332 of GPs.

Ninety-four physicians participated in the survey in the Belgorod region (28.7% - of the inpatient facility and 69.1% of the polyclinic division, $p < 0.001$), including 77 OGs (81.9%) and 17 GPs (18.1%) ($p < 0.001$). According to work experience the physicians were divided into 4 groups: 24.4% - up to 5 years of work experience, 26.7% - from 5 to 10, 22.2% - from 10 to 20 and 26.7% - more than 20 years of work experience. We conducted the questioning on the basis of seven maternity welfare centers, city polyclinics, Belgorod maternity hospital and the Central District Hospital.

The information obtained in the survey was collected and processed in Microsoft Excel.

RESULT AND DISCUSSION:

In the questioning physicians gave the following answers regarding constipation treatment during pregnancy. The majority of surveyed specialists – both physicians of Belgorod region and those who participated in the all-Russian study (70.2% and 75%, respectively) – preferred lactulose (Table 1, Figure 1). A & B sinnosides was chosen by only 6.4% of Belgorod region respondents, which has no significant differences with the all-Russian indicators (8.6%). A Macrogol-containing drug was only named by 6.4% of physicians (9.9% of respondents in the all-Russian study). We did not reveal any significant difference in the comparison of gynecologists' and general practitioners' answers regarding preferences for drug use. The other preferred treatmentmethod was use of glycerin suppositories. It was only chosen by 2.3% of the physicians participated in the all-Russian study and by 7.4% of Belgorod specialists, solely gynecologists ($p < 0.01$). Almost a fifth of surveyed in Belgorod region (19.1%) did not apply drug treatment for constipation and use conservative methods, while according to the all-Russian questionnaire this indicator was significantly lower (11.5%, $p < 0.05$). A great solicitude arose in response to some prescriptions of "Dufaston" (2.1% in Belgorod region, 0.1% in the All-Russian study), which probably was because of the confusion with "Duphalac".

Constipation treatment in pregnant women first of all should be boiled down to the changes in the lifestyle and nutrition [11, 12, 13].

These are some of the recommendations:

- a glass of warm water in the morning;
- enough drinking (1.5-2 liters per day, in the absence of contraindications);
- lowered intake oftea and coffee;
- to exclude products that cause excessive flatus (beans, apple and grape juices);
- to exclude consumption of vegetables enriched with essential oils (onion, garlic, radish);

- to consume more fiber-rich foods as a mean to increase dejection and intestinal tractemptying (coarse-grained bread, apples, carrots, plums, pumpkin, zucchini, dried fruits, etc.);
- to increase consumption of dairy products (kefir, fermented, yogurt);
- to increase vegetable fats intake asin the process of decomposition they create fatty acids stimulating peristalsis;
- it would be useful to add some bran to food;
- frequent intake of food (5-6 times a day) in small portions is recommended,
- it is necessary to avoid hunger or overeating;
- to exclude high-starch-containingproducts;
- to limit the consumption of white rice, white bread and confectionery;
- in the absence of contraindications, exercise therapy, swimming in the pool and walking in the fresh air are of great use.

It must be remembered that purgative enemas are undesirableduring pregnancy, since they can lead to an increase in uterine tone. Only when non-pharmacological methods of constipation treatment are ineffective, laxatives are prescribed. Most laxatives do not have systemic absorption. Nevertheless, the prescription of laxatives should be short-term in order to avoid possible dehydration and electrolyte imbalance in pregnant women. Suppositories are episodically prescribed during pregnancy and lactation (the effect from usage is relatively quick). Drugs that cause chemical irritation of the intestinal mucosa receptors should be avoided [14]. The intake of bulk cathartics can provoke diarrhea and water-electrolyte metabolismviolation. Laxatives based on macrogol, lactulose and psyllium husks are effective in treatment of any form of constipation [15, 16]and are allowed for use during pregnancy and lactation. However,there are still no clinical studies related to effects of mentioned medications on pregnancy course and fetus. It is recommended to avoid high lactulose intake because of possible flatus.

Table 1. The choice of drugs for constipation prevention and treatment in pregnant women: physicians' preferences in the Russian Federation and Belgorod region.

Drug	Belgorod region physicians (n=94)	Russian Federation physicians (n=1066)	p (Belgorod vsRussia)	General practitioners of Belgorod region (n=17)	Obstetrician-gynecologists of Belgorod region (n=77)	p (GPsvsOGs)
Lactulose	66 (70.2%)	799 (75.0%)	p>0.05	11 (64.7%)	55 (71.4%)	p>0.05
Senna	6(6.4%)	92 (8.6%)	p>0.05	0	6 (7.8%)	p>0.05
Macrogol	6(6.4%)	106 (9.9%)	p>0.05	1 (5.9%)	5 (6.5%)	p>0.05
Suppositories with glycerin	7 (7.4%)	24 (2.3 %)	**P<0.01**	0	7 (9.1%)	p>0.05
Drug-free therapy	18 (19.1%)	123 (11.5%)	**P<0.05**	4(23.5)	14 (18.2%)	p>0.05

Note: The respondents could give more than one answer.

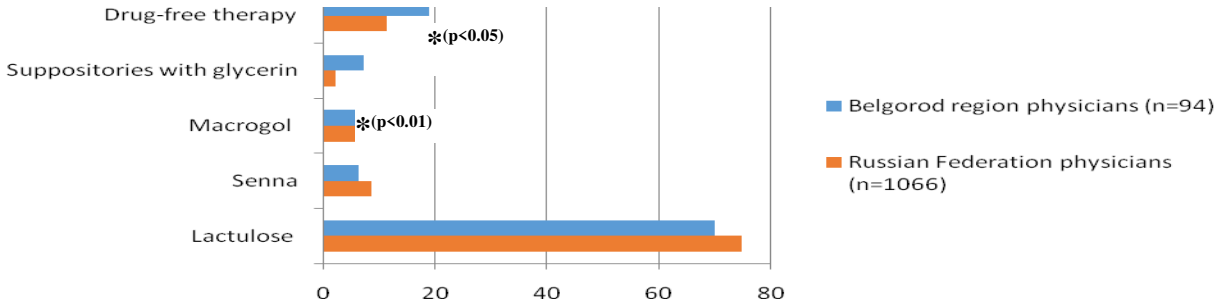

Figure 1. The frequency (%) of drugs prescription for constipation prevention and treatment in pregnant women in the Russian Federation and Belgorod region.

CONCLUSIONS:

Constipation prevention and treatment requires complex approach. There should be carried out the following activities for treatment of existing constipations and prevention of gestational or aggravation of functional constipations: training and psychological impact on a pregnant woman who has constipation (need to develop a defecation reflex at a certain day time); the diet correction – an increase in food that stimulates the colon function (prunes) or increase in food that produces more stool mass (wheat bran); dietary supplements (vitamins, microelements); the lifestyle change (increase in physical activity in the absence of contraindications); elimination of unpleasant feelings and pains in the anus during the defecation (pain-relieving and spasmolytic candles) (according to indications); use of medical laxatives.

The obtained results display that patient management tactics does not fundamentally differ among the obstetrician-gynecologists and general practitioners. More attention ought to be paid to the propaganda of drag-free treatment. Educational activities should be provided for pregnant and lactating women. Drugs administration during pregnancy, including herbal medicines and dietary supplements, has to be under control. Carrying out pharmacoepidemiological studies will provide information needed to develop recommendations for optimal drags use in pregnant women.

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