COMPARATIVE STUDY OF PROPYPHENAZONE AND PARACETAMOL ON FETAL DEVELOPMENT

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Objective: *Paracetamol and propyphenazone are the active ingredients in over the counter oral antipyretic and analgesic drugs. The effects of paracetamol and propyphenazone, alone and in combination have been assessed in experimental animal model.*
Methods: *The tested substances were treated using stomach tube, in Tween 80 solution, one time per day, on day 8 to 14 of pregnancy in three doses: P0 – 3.5 mg/kg body weight, P1 – 35.0 mg/kg b.w., P2 – 350.0 mg/kg b.w. for paracetamol; R0 – 2.1 mg/kg b.w., R1 – 21.0 mg/kg b.w., R2 – 210.0 mg/kg b.w for propyphenazone. There were three groups which received the combination of the drugs in constant proportion 5:3: P0R0, P1R1, P2R2. The two control groups were done: T – receiving Tween 80 solution, C – untreated control. The dames were sacrificed on day 21 of gestation and the number of implants, resorptions, and the live fetuses were counted. The weight of fetuses and placentas, the lengths of fetuses and their tails were checked. The fetuses were fixed either in Boin's fluid for study of viscera organs by Wilson's razor bland technique or in alcohol for study of the skeleton by alizarin red S staining. The Student's t-test and Mann-Whitney's test were used in statistical verification.*
Results: *There was a statistical ($p<0.05$) difference in body weight in P1R1, body length in P2, R0, R1, P1R1, tail length in P2R2, placenta weight in P2R2 compared to control groups without any visceral and external macroscopic malformation.*
Conclusion: *The combination of paracetamol and propyphenazone provided embryotoxic effect as a paracetamol alone in the highest doses.*

VITAMINIC AND ERYTHROPOIETINIC BACKGROUND OF PREGNANCY ANEMIA

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Objective: *to make a comparison of vitamins (VIT) and erythropoietin (EPO) concentrations between pregnants with and without anemia. 18 anemic pregnants were included to the main group. The control group consisted of 20 pregnants without anemia. The serum immunoreactive EPO was measured using the ProCon EPO 24 set (St.- Petersburg, Russia). Serum levels of VIT: retinol (A); tocopherol (E); ascorbic acid (C); riboflavin (B_2); pyridoxin (B_6); в carotin (в Car.); S carotinoids(S Car.) were measured .*
Results. *The main group differed from the control with significantly lower levels of hemoglobin (Hb) and serum ferrum (Fe). ($p<0,01$). It revealed that the EPO activity in anemic pregnant was significantly lower ($p<0,05$) than in control group: 28,27 ± 3,6 and 40,87 ± 3,8 mU/ml correspondingly. The concentrations of VIT A, Car., S Car.,B_2 , B_6 were significantly lower in the main group in comparison with the control: : VIT A – 33,1±2,2 and 51,3±2,9 ?kg/dl ($p<0,001$); $B._2$ - 1,57±0,59 and 4,11±0,83 ng/ml ($p<0,01$); B_6 -3,77±0,42 and 5,56± 0,37 нг/мл ($p<0,05$) correspondingly. A significant difference in levels of VIT E and C between two groups was lacking.($p>0,05$).*
Conclusions. *Thus, decreased serum concentrations of VIT :A, Car., S Car.,B_2 , B_6 and Fe, indicate on metabolic changes in organism of anemic pregnants in comparison with control. Such changes are accompanied by the inhibition of erythropoiesis. This inhibition manifests itself in decreased Hb level and serum EPO activity.*