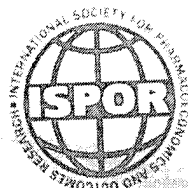


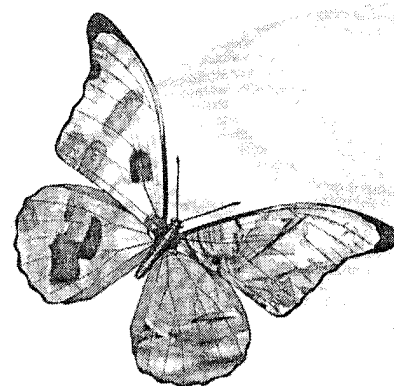
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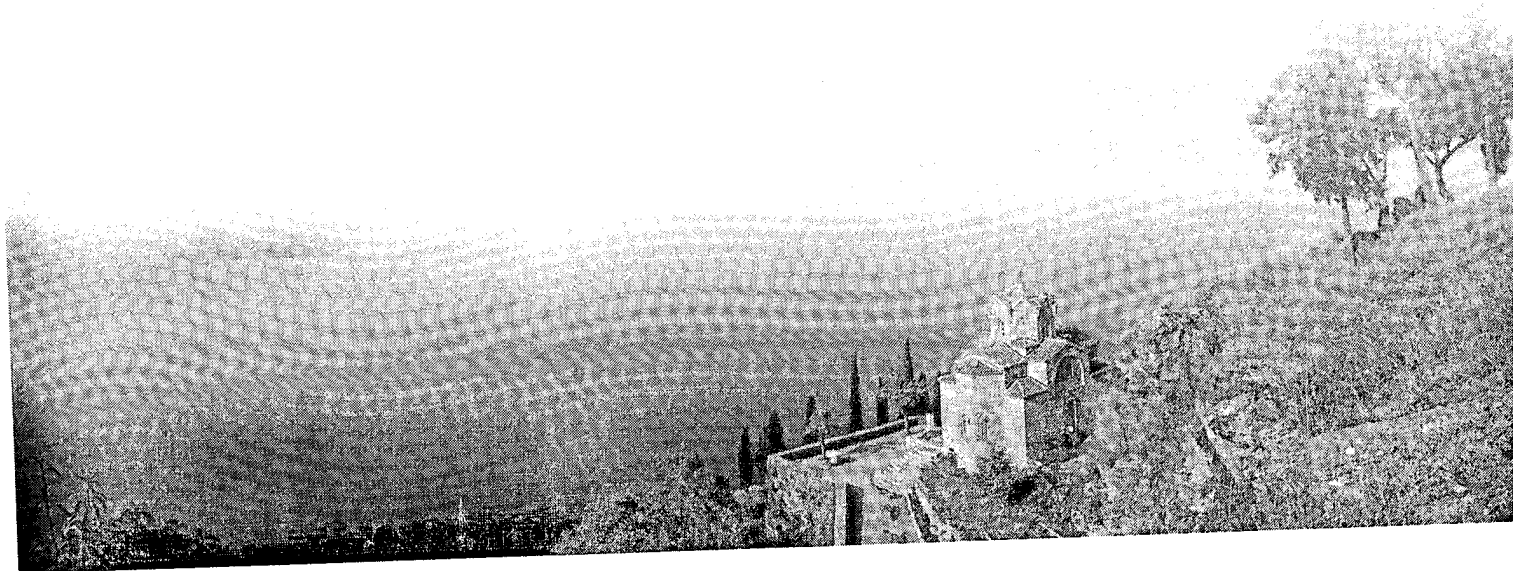
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THE COST OF PREMATUREITY

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Introduction: Prematurity is still a major problem not only in the field of obstetrics and perinatal medicine but also for the society as a whole, not to mention the burdens for the concerned infants and their families.(1) The financial burden of preterm birth (PB) is exceptionally high. The cost of care of premature in Germany is around €730 million per year. When this amount is added to the cost of clinical management of mothers with threatened PB which amounted to about €360 million, the total cost is more than €1 billion. These calculations do not include the cost of long-term care of children and adults with disabilities due to prematurity. (2) The annual cost for care of premature in Sweden is estimated at around €65 million (3), and the USA including caring for the mother, infant, and long-term care, estimates range around \$26 billion. (4) From everything stated above, it is clear that prevention of PB is an important task for perinatologists. The association between infections and prematurity has been proved in many studies and much research has focused on finding infectious risk factors suitable for screening. If early diagnosed, infections can often be treated effectively. The most of the avoidable causes are to be found among patients with ascending genital infections, urinary tract infections and sometimes with systemic infection, even parodontitis, thus suggesting to have the main emphasis on prevention of infections, not neglecting other causes (e.g. psycho-social stress) if possible. In cases of other causes the possibility of intervention and successful therapy is clearly not so good. (5) The human vagina possesses a bio-system which under normal conditions provides a balance between physiologic lactobacilli and pathogenic flora, and so ensures a good protection against the spreading of pathogens, including their ascension to the uterine cavity. Lactobacilli are the main regulating factor of the vaginal milieu, keeping the pH value at the vaginal introitus under 4.5. A simple way of measuring the vaginal pH is to use indicator strips which are introduced into the area of the vaginal introitus before vaginal examination and compare the color of the indicator with the corresponding color chart. Disturbance of the vaginal milieu means threatened infection. It can be detected by pH-measurement at regular intervals, before bacterial vaginosis or infection develops (6). The main reason for the good results is not the early detection of existing infections, but the early detection

of precursors, namely disturbance of the milieu. The German "Self-care" program promoted by Erich Saling, in which vaginal pH was measured by pregnant women twice a week, from the first trimester, showed that participation of only 50% of pregnant women may significantly reduce prematurity, thus leading to significant annual save of expenses. (7)

Results and discussion: The study conducted at the University Clinic of Obstetrics and Gynecology, Skopje, included 120 pregnant women <37 gw, divided in two groups - the first group - with vaginal pH measurement from the first trimester of pregnancy, and the second group - with preterm labor. In cases of elevated vaginal pH we started therapy with *Lactobacillus* or lactic acid locally and in cases of positive cultures we suggested treatment according to antibiogram. The results showed significantly lower percent of PB among women controlled from the first trimester (11% vs. 86%). These 11% were all near term (34-36gw), opposite to 86% from the other group, of which 17,4% were between 32-34gw, and 26,7% were <32gw. The risk for PB was eight times higher among women with elevated vaginal pH. The results from the study are in accordance with the statement of Saling and Caillouette that the routine vaginal pH testing by every pregnant woman is simple, inexpensive (certainly relative to the cost of a damaged child), can lead to better informed sex habits and better vaginal health. "How much more simple and inexpensive does the solution need to be?" (7)

Conclusion: Regular vaginal pH measurement from the first trimester of pregnancy is almost an ideal method for a reliable, rapid 'bed-side' risk assessment. It is easy, clinically simple strategy to identify the patient at risk and may achieve reduction in the rate as well as the cost of prematurity. Efficient screening should start early, before 16 gw and should be applied often enough.

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