

## CLINICAL CASE

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### **Congenital Syphilis in the Composition of the Mixed Infection in a Child One Month of Life**

#### **ABSTRACT**

This article deals with the clinical case of early congenital syphilis in the 1 month child, admitted to the Oncology Department of the Pediatric center of Republican hospital №1 – National Center of Medicine and the Children's City Hospital №2. Complaints on admission to the hospital were rashes all over the body, yellowness of the skin, general weakness. The child was diagnosed with a congenital mixed infection: early syphilis, cytomegalovirus, herpes, chlamydia, mikoplazma.

The patient was examined by specialists: a neurologist, a hematologist and dermatologist. Dermatologist recommended treatment with penicillin in a dose 100 thousand kg/day, divided into 6 injections over 28 days. In addition, neocytotect intravenously in age dose according to the scheme, immunovenin within 3 days. Also there was conducted hemocomponent substitutional, symptomatic therapy and albumin. On the background of such treatment the child's condition has improved and he has no longer a temperature, put on weight.

**Keywords:** syphilis, newborn, anemia, Mycoplasma infection, Chlamydia, herpes, thrombocytopenia.

#### **INTRODUCTION**

In Russia and other countries, after a period of relatively low and stable in the incidence of syphilis in the 1980-ies, it was observed a steady tendency of its growth since 1990 [1, 2]. The persistence of high rates of syphilis can be explained by the influence of a number of factors: the deterioration of the socio-economic situation, the transformation of sexual culture and behavior of the population, changes in the system of clinical supervision and identify contact persons [1, 4]. Serious health problem remains congenital syphilis, acquired syphilis in children and adolescents, syphilis infection in pregnant women. Violation of fetal development on the background of intrauterine infection, usually combined with a reduction in adaptation of the newborn in the neonatal period, impaired physical and intellectual development of children in the postnatal period

[5, 6]. According to official statistics the number of children suffering from early congenital syphilis (PBC) in 2005 was 325 persons, in 2006 – 321, in 2007, 325 in 2008. – 249, in 2009 – 190 [3].

The actuality topical issues: of timely diagnosis and adequate therapy of this disease. In the process of diagnosis of PBC is of great importance in the differentiation of the latent form of the disease from the symptomatic.

**The aim of this article:** to show the peculiarities of the course of congenital syphilis on clinical example

### THE RESEARCH RESULTS

The clinical case of early congenital syphilis in the child 1 month. Boy A. S. at the age of 1 month. 12 days was admitted to the Oncology Department of the pediatric center of Republican hospital №1 – National center of medicine (RB № 1 – NCM) from ulus with a referral diagnosis of severe anemia, thrombocytopenia and acute leukemia. Complaints on admission to the hospital with rashes all over the body, yellowness of the skin, General weakness.

The child's mother is 19 years old. The boy is from the 1 pregnancy, desirable. The first and second half of pregnancy proceeded with toxicosis, anemia. Childbirth in the period of 40 weeks, natural delivery without complications. During pregnancy the mother of the child was registered, but on obstetric examination was not regularly. Reaction of microprecipitation (RMP) RW the mother during pregnancy with the words was negative. Body weight at birth – 3050 g, length – 48 cm, chest circumference – 34 cm, head circumference – 33 cm Estimation on Apgar scale 8/9 points, cried at once, screaming loud. To put the breast in the delivery room, sucking actively. Umbilical remnant fell on the 5th day in the hospital. On day 7 was discharged home. From birth on breastfeeding. Immunizations by age (BCG, the vaccine against hepatitis b) made in the nursing home. Reactions to vaccinations were not.

According to his mother from the moment of birth the child is marked ikterichnost, pale skin. At 3 weeks of age the mother noticed an increase the volume of the stomach. At the age of 1 month. 10 days got a rash on the body, which appealed to a district clinic. On the same day the child was hospitalized in children's Department of the Central ulus hospital. In the complete blood count at admission revealed lymphocytic leucocytosis, normocytic normochromic severe anemia, accelerated erythrocyte sedimentation rate (33,7 leukocytes x 10<sup>9</sup>/l, erythrocytes of 1.29 x 10<sup>12</sup>/l, hemoglobin 50 g/l, stab neutrophils 9 %, segmented neutrophils 21 %, lymphocytes 60 %, monocytes 10%, ESR 71 mm/h). On the second day of hospitalization the boy by ambulance aircraft delivered in the Republic of Sakha №1-NMC Pediatric center in the Department of Oncology. In such grave condition was hospitalized to the intensive care unit. The condition is

regarded as serious. The body temperature of 37.5°C. Skin is pale yellow in color, rash on the face, all over body erythematous-papular in nature (Fig. 1). The rash fades when pressed. The sclera and visible mucous membranes icteric and pale. Peripheral lymph nodes were not enlarged. Musculoskeletal system without visible pathology. Breathing through the nose free, groaning. Puerile breathing, wheezing no, NPV 50 min. thorax cylindrical shape. Heart rate 124 per minute. Pulse rhythmic, satisfactory filling. The boundaries of the heart are not changed. Heart sounds are clear. Systolic murmur at the apex. Tongue moist. The abdomen is soft, painless, swollen. The liver acts from under the costal margin to 5.0 cm, densely-elastic consistency, smooth edges, the spleen acts – 5.0 cm thick. In the hemogram on the day of hospitalization remains leukocytosis, severe anemia, thrombocytopenia, accelerated ESR (leukocytes 31,6 x 10<sup>9</sup>/l, erythrocytes of 1.36 x 10<sup>12</sup>/l, hemoglobin of 45 g/l, MCV 101,0 FL, MCH of 33.0 PG, MCHC is 32.8 g/DL, RDW-CV of 18.5 %, RDW-SD of 67.6 fl; platelets 25 x 10<sup>9</sup>/l; metamyelocytes 1,0 %, stab neutrophils 9,0 %, segmented neutrophils 24 %, eosinophils 1.0 per cent, lymphocytes 54,0 %, monocytes 11.0% and normoblasts by 16.0% Erythrocyte sedimentation rate 88 mm/hour). In the biochemical analysis of blood – hypoproteinemia, hypoalbuminemia, hyperbilirubinemia at the expense of both factions, increased levels of transaminases, lactate dehydrogenase (total protein of 44.7 g/l, albumins 18.7 g/l, urea 8.3 mm/l, creatinine 38,9 mm/l, bilirubin total 243,1 µm/l, direct bilirubin 90,3 mm/l, ALT to 125.9 u/l, AST 520 u/l, LDH 1139,5 u/l, glucose of 4.45 mm/l). In General, the analysis of urine proteinuria small to 0.3 g/L. In General, the analysis of cerebrospinal fluid: a small increase in the protein level. RMP RW positive ++++the titer of 1:128, found in the blood of antibodies to *Treponema pallidum* Ig G and Ig M titer to 11.35. The mother of the RMP RW positive ++++the titer of 1:32 is detected in the blood of antibodies to *Treponema pallidum* Ig G and Ig M titer 7,44. IFA of cerebrospinal fluid on syphilis: Ig M – 1:640, Ig G – 1:640, RPGA +++++, RMP RW +++++, a caption 1:64. In blood on IFA on pre-natal infections Ig M to a cytomegalovirus are found. In the child's urine are found by polimerazno-chain reaction DNA of a virus of simple herpes, a cytomegalovirus, *Chlamydia trachomatis*, *Mycoplasma hominis*, *Mycoplasma pneumonia*.



**Fig.1. Patient with a congenital syphilis**

Thus, at the child the congenital mixed-infection is stated: early syphilis, cytomegalovirus, herpes, chlamydia, mikoplazma.

The child is examined by experts: neurologist, hematologist, dermatovenerologist. The dermatovenerologist treatment by penicillin in a dose of 100 thousand unit for kilogram is recommended. The pieces/kg/days divided into 6 introductions within 28 days. Besides are appointed intravenously neocitotek in an age dose according to the scheme, immunovenin within 3 days. Also haemocomponent replacement, symptomatic therapy was carried out, albumine was entered. Against such treatment the condition of the child improved, ceased to temperaturit, put on weight. At an extract from a hospital (I carried out to DGKB No. 2 35 of hospital-days) a condition of the child the heavy stable. The health of the child especially doesn't suffer, isn't in a fever. On artificial feeding, sucks actively. Icteric coloring of skin and the visible mucous is less intensive. The stomach palpation painless, by the sizes of a liver and spleen is noted positive dynamics (a liver of +5,0 cm, a spleen of +3,5 cm). For the 28th day from the beginning of an antibiotikoterapiya in blood of the boy of an antibody to *Treponema pallidum* Ig M negative, Ig G 1:320, RW a caption 1:16, RPGA +++. In a hemogramma before an extract leukocytes 9,5 x

109/l, erythrocytes  $3,68 \times 10^{12}/l$ , hemoglobin of 102 g/l, p.b. of 2,0%, with / I am the 20th %, lymphocytes of 75%, monocytes of 1%, eosinophils of 1%, platelets  $199 \times 10^9/l$ , SOE of 32 mm/h. In biochemical blood test bilirubin of 104 microns/l, direct fraction of 77,6 microns/l, ALT of 206 Pieces/l, nuclear heating plant of 190 Pieces/l.

Thus, authors gave a striking example of the mixed infections: early congenital syphilis, tsitomegalovirusny, herpes, chlamydial, mikloplazmenny. At this patient the clinic of early congenital syphilis with symptoms, different from the classical description was prevailing that is perhaps connected with stratification of other pre-natal infections.

### REFERENCES

1. Torshina I.E. Vrozhdenyj sifilis. Kliniko-jepidemiologicheskie osobennosti, jepidemiologicheskie aspekty i optimizacija organizacionno-profilakticheskikh meroprijatij v sovremennyh uslovijah [Congenital syphilis. Kliniko-epidemiologicheskyy features, epidemiological aspects and optimization of organizational and preventive actions in modern conditions]. Smolensk, 2010, 168 p.
2. Zatorskaya N.F. Sovremennaja diagnostika i lechenie rannego vrozhdenno sifilisa [Modern diagnostics and treatment of early congenital syphilis]: dis. ... kand. med. nauk. Moscow, 2011, 91 p.
3. Zaharova L.A. Varianty, porazheniya serdechno-sosudistoy sistemy u novorozhdennyh, rozhdennyh zhenshhinami s sifilisom [Options, defeats of cardiovascular system at the newborns born by women with syphilis]: dis. ... kand. med. nauk. Moscow, 2010, 132 p.
4. Loseva O.K. Malygina N.S. Varianty, porazheniya serdechno-sosudistoy sistemy u novorozhdennyh, rozhdennyh zhenshhinami s sifilisom [Options, defeats of cardiovascular system at the newborns born by women with syphilis] J Epidemiologiya i gigiena, 2010, №1.
5. Ovchinnikova A.A. Perinatal'naja patologiya nervnoj sistemy u detej; rozhdennyh zhenshhinami, inficirovannymi sifilisom (principy rannej diagnostiki [Perinatal pathology of nervous system at children; given rise by the women infected with syphilis (the principles of early diagnostics)]: dis. ... d-ra med.nauk, Perm, 2000, 255 p.
6. Mavrov G. Clinical and epidemiological features of syphilis in pregnant-women: the course and outcome pregnancy / G. Mavrov // Gynecol. Obstet. Invest. 2001. - Vol.52. - № 2, P. 114-118.

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