CLINICAL CASE

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THE CHEMATOLOGICAL DISORDERS IN ADOLESCENT ON THE BACKGROUND OF TUBERCULOSIS TREATMENT

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ABSTRACT

This article describes a clinical case of hematotoxic adverse reaction in a patient on the background of anti-tuberculosis chemotherapy. It has been established that the appearance of anemia of mixed genesis with thrombocytopenia in a patient is associated with the intake of PASK.

PASK instruction indicates the appearance of thrombocytopenia, leukopenia in rare cases. On the background of the replacement therapy with blood components and the cancellation of anti-TB drugs, blood counts returned to normal.

The probable degree of reliability of cause-effect relationship by adverse side reaction is established.

Currently, the patient's condition is satisfactory. The patient feels good. The function of hematopoiesis is restored.

Keywords: chemotherapy, thrombocytopenia, anti-tuberculosis therapy, adverse reaction, anemia, leukopenia.

A change in the parameters of the General blood test is a frequent phenomenon in patients with tuberculosis. They reflect the severity of intoxication, especially the reactivity of the body, the degree of tissue damage, the presence of concomitant pathology and violations of nutritional status, in rare cases; indicate a specific lesion of the hematopoietic system [1]. As a rule, successful tuberculosis treatment is accompanied by a normalization of the haemogram. However, in some patients during anti-tuberculosis therapy, there are negative shifts in hematological indicators, indicating an undesirable side effect of anti-tuberculosis drugs. The frequency of hematological adverse reactions is low-from 1.2 to 22.8% [3, 4]. Disorders in the blood system are a rare but potentially dangerous complication of anti – tuberculosis chemotherapy. Anti-tuberculosis drugs can cause a decrease in certain pools of blood cells due to suppression of their formation in the bone marrow or accelerated destruction in the bloodstream [2]. We present a clinical case of adverse reaction with tuberculosis chemotherapy

The aim: to show the clinical observation of reactions due to tuberculosis therapy in a patient of 20 years.

The results of observation:

From the history of the disease: Patient D, female, born in 1998, hospitalized in the children's Department №2 Research and Practice Center for Tuberculosis of Republic Sakha (Yakutia) on 05.07.2016.

From the anamnesis it was found out that it consists on the dispensary account since May 2016 on contact with mother. Mother is patient with infiltrative tuberculosis of the lower share of the right lung, Mycobacterium tuberculosis (MBT) + (sensitivity of Mycobacterium tuberculosis to anti-tuberculosis drugs is kept). Clinically, there is a constant sub febrile temperature; the state of health does not suffer much. On radiographs of the chest organs detected focal shadows in S1, S2, S3, S4, S6 of the right lung and S1-2, S3, S6 of the left lung in the phase of infiltration and disintegration cavities, the increase of intrathoracic lymph nodes. On 14.07.2016 by medical commission No. 292 exhibited clinical diagnosis: A15.0 Disseminated pulmonary tuberculosis in the phase of infiltration and decay Mycobacterium tuberculosis (+).

From the protocol of medical commission for childhood: assigned 1 chemotherapy regimen intensive phase (h 0,6 +R 0,45+Z 1,5+e 1,2) 18.10.2016 repeated medical commission to assess the effectiveness and outcome of tuberculosis chemotherapy №246 for routine monitoring. The medical commission agreed to: recommend the chemotherapy should be extended to 120 doses. On 15.11.2016, medical commission was carried out to assess the effectiveness and outcome of tuberculosis chemotherapy No. 267 under planned control. The patient received 120 doses of chemotherapy regimen I. In dynamics marks the cessation of bacterial excretion, remain small decay cavities S1-2 of right lung. Taking into account the data, it is recommended to extend the intensive phase of chemotherapy to 150 doses. On 09.12.2016 was consultation thoracic surgeon.

Conclusion after the consultation: surgical treatment is indicated. On 20.01.2017 patient transferred to the surgical department. On 25.01.2017 doctors were held 1 stage of surgical treatment: resection S1-2 left lung. On 09.02.2017 was held the 2nd stage of surgical treatment: atypical resection S1-3 in the right lung. From 27.02.2017, the postoperative period was uneventful. Patient was transferred to the children's Department №2 with the diagnosis: Disseminated pulmonary tuberculosis with the formation of tuberculosis. Resection S1-2 left lung from 25.01.2017, S1-3 right lung 09.02.2017.

01.03.2017 was medical commission to conduct analysis of the effectiveness and outcome of therapy No. 46 for corrective control. Medical commission solution recommended therapy with 02.03.17: isoniazid, pyrazinamide, etambutol, PASK for 2 months. For 4 months to appoint a continuation phase. The next control was in May 2017, after receiving 60 doses.

In this time patient periodically notes the appearance of pain in the joints of the upper and lower extremities, the appearance of stiffness in the joints. Visually, the joints are not changed. No swelling or hyperemia.

On 12.03.2017 complaints of runny nose, cough, sore throat, joint pain. The diagnosis: a respiratory catarrh.

On 13.03.2017, the patient complained of pain in the joints of the upper and lower extremities, General weakness, and an increase in body temperature to 37.

On 14.03.2017 patient was examined by a pediatrician. State of health does not suffer; the general condition is closer to moderate severity. The body temperature was 36.6. Heart rate 90 bpm.

Conclusion: Normochromic anemia 3 degree. Thrombocytopenia.

Recommended: to appoint the analysis of blood and urine. As a result

of the survey the following results were obtained: blood counts was obtained 14.03.2017: erythrocytes of 2.06, 62 hemoglobin, leukocytes 4.7, 17 thrombocytes, erythrocyte sedimentation reaction 57 mm/HR, segmented granulocytes 55, eosinophil 3, monocytes 4. According to the results of blood analysis revealed anisocytosis, severe normochromic anemia. (table 1)

Biochemical analysis of blood from 15.03.17: Total protein – 70 g/l, albumin 37 g/l, urea – 8.0 mg/DL, creatinine was 77 μmol/l, total bilirubin 22 mmol/l, direct bilirubin – 10.2 mmol/l, ALT– 33 U/l, aspartate aminotransferase (AST) is 25 U/l, glucose 4.6 mmol/l, kalium 4.8 mmol/L.

On 14.03.2017 examination of the doctor, head of the Department of phthisiology. The patient complains of coughing with sputum, according to the patient brown-yellow. During the inspection of the tonsils the tongue is geography. Heart rate 90 beats 1 min. Conclusion: thrombocytopenia. Severe anemia.

15.03.20. Cough persists. Doctors obtained 30 ml of sputum, mucous nature without pathological impurities. The review radiography of the chest organs, ultrasound of abdominal organs is recommended.

It is noted in blood tests from 13.03.17 (Table 1) the appearance of a picture of severe normochromic anemia, possibly associated with the administration of chemotherapy. In order to exclude internal bleeding, urgently appoint a review x-ray of the lungs in 2 projections, ultrasound of the abdominal cavity. On the radiograph in 2 projections: state after 2-sided resection. Behind the first and second rib of the right and in the first intercostal space of the left lung, thin chains of tantalum seams, adjacent lung tissue, areas of fibrous consolidation are determined. Compaction of the Para costal pleura in 4-5 intercostal left lung to 4 mm.

Conclusion: Disseminated tuberculosis. Areas of fibrous consolidation are determined. Compaction of the Para costal pleura in 4-5 inter costal left lung to 4 mm.

On 15.03.2017 Consultation with the chief freelance hematologist Ministry of Health: to connect the treatment of vitamins, replacement therapy. According to the chief freelance hematologist of Ministry of Health the appearance of anemia is associated with chemotherapy.

On 15.03.2017 was examination of anesthesiologist-resuscitator. At the time of examination, the patient is conscious. Clinical manifestations of internal bleeding were not revealed. There are no respiratory or hemodynamic disorders. According to laboratory data, there is critical thrombocytopenia and severe anemia. To carry out transfusion therapy with blood components, the patient under the control of a transfusiologist is transferred to the Department of anesthesiology, intensive care and intensive care (OARIT). The General condition was regarded as serious. The contact is available. Tongue wet, clean skin clean pale dry. Turgor and elasticity are preserved. Breath adequate is conducted in all departments. Heart sounds are loud, rhythm is sinus, no noise. Pulse 80 beats per 1 min. CD 18. The abdomen is soft, painless, peristalsis auditioned. The liver is not increased. The diagnosis: Thrombocytopenia of unknown etiology.

Recommendations: to determine the blood group, rhesus factor with genotypes.

On 16.03.2017 the doctors held a consultation. The medical commission diagnosed Disseminate pulmonary tuberculosis. MBT (+) 1A DU, A15.0. Resection of the S 1-2 of the left lung, S1-3 right lung. Severe normochromic anemia (Table 1). Recommended: anti-tuberculosis drugs to cancel before the normalization of blood parameters, prescribe replacement therapy with blood components, vitamins B6, B12, ascorbic acid, dynamic monitoring of blood parameters. On 16.03.2017 the medical card of the patient was checked by the pharmacological control service, as a result, an act was drawn up, indicating the need to establish a causal relationship of the appearance of anemia of mixed genesis with thrombocytopenia associated with taking anti-tuberculosis drugs. In the instructions of the drug PASC indicated adverse reactions in the form of thrombocytopenia in rare cases.

19.03.2017 12.00 According to laboratory data, there is a significant positive trend in the form of normalization of blood parameters (Table 1).

29.03.2017. Medical commission №64 was conducted. Solution: the occurrence of mixed-type anemia with thrombocytopenia is associated with PASK, which was appointed on March 3, 2017 due to the need to resume intensive chemotherapy phase 4 with anti-tuberculosis drugs after surgical treatment in accordance with Federal clinical guidelines (2014) in conjunction with H, E, Z.

In the PASK instructions, thrombocytopenia and leukopenia are rarely allowed. On the background of replacement therapy with blood components and cancellation of anti-TB drugs, blood counts returned to normal on the 8th day of treatment.

In connection with the above, a probable degree of reliability of a causal relationship by an adverse side reaction has been established.

On March 29, 2017, a notice was sent to the Office of Department of Russia health control Republic Sakha (Yakutia) on adverse effects, undesirable reactions.

Currently, the patient's condition is satisfactory. The patient feels good. The hematological complication was arrested; the blood formation function was restored.

Findings:

1. Changes in blood test indicators from 13.03.2017, the appearance of anisocytosis in the blood test, severe

General blood count

Date	06.07.16	05.08.16	13.03.17	16.03.17	19.03.17	23.03.17	30.03.17
WBC	7,5 10^9/l	6,7	4,7	2,0	6,4	6,3	5,8
LYM#	2,5 10^9/l	1,7	1,6	0,6	2,7	2,0	1,5
MID #	0,5 10^9/l	0,6	0,2	0,2	0,9	0,4	0,5
GRA#	4,5 10^9/l	4,4	2,9	1,2	2,8	3,9	3,8
LYM %	32,9	25,8	33,7	31,1	42,8	32,2	26,0
MID%	6,5	8,3	5,3	8,1	14,2	6,8	8,4
GRA %	60,6	65,9	61,0	60,8	43,0	61,0	65,6
RBC	4,30 10^12/l	4,03	2,06	1,91	3,12	3,13	3,45
HGB	100 g/l	93	62	53	89	95	108
MCHC	297 g/l	300	336	325	330	338	326
MCH	23,2 pg	23,0	30,0	27,7	28,5	30,3	31,3
MCV	78,3 fl	77,0	89,4	85,8	86,5	90,0	96,0
RDW– CV	18,0 %	19,2	16,3	17,5	16,7	15,6	17,7
RDW-SD	46,9 fl	50,6	52,4	51,6	51,6	47,9	58,8
HCT	33,6 %	31,0	18,4	16,3	26,9	28,1	33,1
PLT	324 10^9/l	269	17	17	53	208	611
MPV	7,4 fl	6,8	9,5	8,6	8,8	8,3	6,9
PDW	15, 3	15,4	17,6	17,9	16,5	15,9	15,3
PCT	0,239%	0,182	0,016	0,014	0,046	0,172	0,421

normochromic anemia appeared after taking PASK in combination with other anti-tuberculosis drugs, which were prescribed in accordance with Federal clinical guidelines (2014) for the diagnosis and treatment of tuberculosis in children and adolescents. The changes are probably associated with inhibition of bone marrow hematopoiesis while taking the PASK drug.

2. According to the order of the Ministry of Health of the Russian Federation of 26.08.2010 No. 757n “On approval of the procedure for monitoring the safety of drugs for medical use, registration of side effects, serious adverse reactions when using drugs for medical use” after excluding other factors, a probable degree of reliability of causation was identified an adverse effect of adverse reactions to PASC.

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A CASE OF RARE LOCALIZATION OF EXTRAPULMONARY TUBERCULOSIS AND SCREENING WITH CROHN’S DISEASE

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ABSTRACT

The article speaks about the clinical case of rare localization of extrapulmonary tuberculosis, abdominal tuberculosis in incurable stage. **Introduction.** Abdominal tuberculosis is characterized by polymorphism of clinical presentation, and sometimes proceeds only with a fever without any symptoms, characteristic for diseases of gastrointestinal tract. Intestinal process localization can arise at any stage of primary and secondary tuberculosis development. Sometimes it develops as a separate disease in the form of the circumscribed lesion of ileocecal or other part of the intestine. [1]. Diagnostics of extrapulmonary tuberculosis localizations is difficult, this disease tends to proceed hidden, behind a mask of other pathological processes [2,3,4]. Unfortunately, there are no many researches on extrapulmonary forms of tuberculosis that cause late detection, more frequent at uncurable stage [4]. **Research objective:** Description of a clinical case of rare localization of tuberculosis and differential diagnostics with Crohn’s disease. **Materials and research methods:** we present some data of clinical supervision of the patient with abdominal tuberculosis: infiltration-ulcer tuberculosis of intestine with involvement of iliac and colon (MTB (+), analysis PCR-RV). Tubercular mesadenitis. Extensive miliary dissemination of serous membranes of abdomen, focal generalization in the liver, spleen, in the upper lobe of the right lung (AFB (2 +), luminescent method. Complications of the basic disease: Punching of tubercular ulcers of iliac, cecum and sigmoid guts. Diffused purulent - stool peritonitis. **Results and discussion:** Patient A. was admitted to «Republic Hospital №2–Emergency Center» in February 19, 2018, at 12.13 p.m. Diagnosis on admission: Crohn’s disease with a lesion of cecum, ascending colon, active stage. Severe degree. Peritonitis. After preoperative preparation the patient was operated according to the emergency indications. Operation course. Date 19.02.2018. Time: the beginning – 14.55, the end - 16.40. Operation: Subtotal colectomy. Remote macromedication: large gut with 40 cm of iliac. Postoperative diagnosis: Crohn’s disease with a lesion of large and small intestines. Active stage, severe degree. Perforation of ileac and cecum. Cecum necrosis. Large intestine phlegmon. Diffuse purulent - fecal peritonitis. A terminal stage. 19.02.2018 at 20.00. Cardiac arrest happened on the background of the intensive therapy AP 0/0, heart rate 0. Resuscitation actions without effect were within 30 min. Biological death was verified at 20:30. **Postmortem diagnosis.** Basic: Crohn’s disease with a lesion of small and large intestines. Active stage, severe degree. Perforation of iliac and cecum. Cecum necrosis. Large intestine phlegmon. Diffuse purulent-stool peritonitis. A terminal stage. Complications of the basic diagnosis: Perforation of iliac and cecum. Cecum necrosis. Large intestine phlegmon. Diffuse purulent-stool peritonitis. A terminal stage. Cachexia. A syndrome of disseminated intravascular coagu-