properties of blood at any shear rates were observed compared with the parameters of the comparison group. The levels of HPL and MWM in the blood of these treated animals remained high relative to the corresponding indices of the intact group and were comparable to the comparison group.

Conclusions. The results obtained may indicate a pathogenetic relationship between the intensification

of free radical oxidation of lipids and a violation of the viscosity properties of blood in experimental PC-1 alveolar liver cancer. The introduction of extracts of narrow-leaved fireweed and European birthwort to white rats with transplanted PC-1 liver cancer corrected violations of the rheological properties of blood at high shear rates and manifested antioxidant properties.

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TRANS-SCROTAL ORCHIECTOMY IN LOCALIZED YOLK SAC TESTICULAR TUMORS IN CHILD. HOW IS IT SAFE?

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ЧРЕЗМОШОНОЧНАЯ ОРХИДЭКТОМИЯ У РЕБЕНКА С ЛОКАЛИЗОВАННОЙ ОПУХОЛЬЮ ЯИЧКА, ИСХОДЯЩЕЙ ИЗ ЖЕЛТОЧНОГО МЕШКА. НАСКОЛЬКО ЭТО БЕЗОПАСНО?

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Testicular tumors in children are rare, founding only 1 % of all pediatric solid tumors. We report a case of 14 months old child, who was referred to us for recent scrotal painless tumefaction. The clinical examination with the US confirmed the testicular involvement of this tumor. An abnormally elevated blood level of the α -fetoprotein was decisional for the embryonic origin of this tumor. A trans-scrotal approach realized a radical orchiectomy in the bloc with a high ligation-section of the spermatic cord. The histopathology examination of this tumor has shown a yolk sac tumor. The α -fetoprotein was normalized

within the first month after surgery. Regular follow up for about three years did not show any clinical or radiological signs of recurrence. This case indicated the importance of early discovery and surgery as rapid as possible. We think that in localized yolk sac tumors of testis (stage I) and trans-scrotal approach of radical orchiectomy alone is sufficient.

Keywords: yolk sac tumors, pediatric testicular malignancy, chemotherapy, trans-scrotal orchiectomy, infant

Опухоли яичка у детей встречаются редко, составляя не более 1 % от всех солидных опухолей детского возраста. В исследовании приводится клинический случай ребенка 14 месяцев жизни, который был направлен по поводу безболезненной опухоли яичка. Клиническое исследование с УЗИ подтвердило локализацию образования в яичке. Резко повышенный уровень α -фетопротеина в крови свидетельствовал об эмбриональном происхождении опухоли. Радикальная орхидэктомия единым блоком с высоким лигированием семенного канатика была осуществлена чрезмошоночным доступом. Гистологическое исследование показало наличие эмбриональной опухоли из желточного мешка. В течение первого месяца после операции α -фетопротеин нормализовался. Регулярное обследование в течение последующих 3 лет не выявило признаков рецидива. Данный случай показал важность раннего обнаружения и своевременного хирургического вмешательства. Мы полагаем, что при локализованных опухолях желточного мешка, локализованных в яичке (I стадия), проведение радикальной орхидэктомии через мошоночный доступ является достаточным.

Ключевые слова: опухоль желточного мешка, злокачественная опухоль яичка, химиотерапия, чрезмошоночная орхидэктомия, младенец

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Для цитирования: Абдулвахед О. ЧРЕЗМОШОНОЧНАЯ ОРХИДЭКТОМИЯ У РЕБЕНКА С ЛОКАЛИЗОВАННОЙ ОПУХОЛЬЮ ЯИЧКА, ИСХОДЯЩЕЙ ИЗ ЖЕЛТОЧНОГО МЕШКА. НАСКОЛЬКО ЭТО БЕЗОПАСНО? *Медицинский вестник Северного Кавказа*. 2019;14(3):541-544. DOI – <https://doi.org/10.14300/mnnc.2019.14135>

CT – computed tomography

hCG – human chorionic gonadotropin

Testicular yolk sac tumors, though very rare, are considered as the most common in infants and children [1]. They have the particularity to be accessible to clinical examination; this particularity allowed the early diagnosis and gave these children a chance to be cured [2, 3]. The questions of a necessity to prescribe chemotherapy in the early stages of these tumors remain as open. Also an operative access selection (an inguinal or a trans-scrotal approach for orchiectomy) in these patients is always a subject of discussion.

Case report. A child of 14 months old was referred to us in recent painless right scrotal swelling observed by the mother during diaper changing. Nothing particular in his history and the familial history did not found. An upper respiratory tract infection two weeks earlier was treated by his pediatrician. On examination doctor defined painless right testicular firm swelling, nonadherent to the scrotal skin without changes in the skin color (Fig. 1). The left testicle was normal in size and well situated on the left side of scrotum. The lymph nodes in the inguinal or abdominal did not detect. The rest of the clinical examination was normal parameters.

An ultrasounds examination revealed the testicular inclusion in the tumor. Serum α -fetoprotein and hCG blood test were analyzed. A high level of α -fetoprotein (6860ng/ml) with normal hCG blood test were detected.

The surgery was done under general anesthesia, via transverse scrotal incision; the tumor was delivered quickly out of the scrotum with its intact capsule (Fig. 2). The spermatic cord was dissected gently in the block with it' sleeves reaching the internal inguinal ring. A clamp was put on the cord. At this stage, we made an incision on the capsular surface a distance from the scrotal incision to be sure in the tumor's nature of the testis (Fig. 3). After that the spermatic cord was sectioned as high as possible in the deep inguinal ring with no lymphadenectomy. The scrotal skin was closed. With new instruments set, we realize the contralateral transcutaneous left or-

chiopexy surgery. The operative time was less than 30 minutes. The child was discharged from the hospital the next day.

Fig. 1. The scrotum appearance. There is an increase in the right half of the scrotum as a dropsy testicle

The morphological analysis showed a localized yolk sac testicular tumor without invasion of any of the testicular sleeves. As such, it was classified as stage I yolk sac tumor. The question of the chemotherapy prescription or not was discussed with the pediatric oncologist and the parents. We decided to proceed to clinical observation

with α -fetoprotein screening. The dynamics of which level was as follows: 2800 ng/ml on the 5th postoperative day, <100 ng/ml on the third week, and normal level (10 ng/ml) one month later.

Fig. 2. A trans-scrotal approach realized the radical orchiectomy in the bloc with a high ligation-section of the spermatic cord

Fig. 3. Postoperative yolk sac testicular tumor

Fig. 4. The local appearance of the patient three years after surgery

The follow up by α -fetoprotein screening monthly during the first six months and every three months during the next year with a CT scan was shown no tumor recurrence and metastasis. After three postoperative years of follow up with clinical, radiologic, and laboratory analysis wherein the normal limits with no signs of recurrence (Fig. 4).

Discussion. It is well known that though rare, yolk sac tumor is the most common non-seminomatous germ cell tumors in infants and young children. The scrotal localization of these malignant tumors makes them visible and accessible to diagnosis in the very early stages by that they have the chance to be cured. No question about the necessity of orchiectomy and the need for chemotherapy in the advanced stages, but still exists a controversy in 2 points concerning the first stage of this tumor (stage I), and the approach used for this surgery inguinal or trans-scrotal. Concerning the first point, many publications show no significant difference in the outcome between those children who received and those who did not receive chemotherapy. At the research [3], obtain 100 % of children surviving after surgery alone. In work [2], described 96 % survivals after three years follow up with orchiectomy alone. Although in few cases a tumor's relapse was detected in those who were treated by orchiectomy alone. Nevertheless, this was responded successfully to chemotherapy at the time of detection [4]. The majority of this publication reveals about 90 % of 2 years tumor-free by orchiectomy alone as such, excluding the risks of toxicity of adjuvant chemotherapy.

Only a few publications recommend primary adjuvant chemotherapy at the stage I of the yolk sac tumors. So in work [5], authors had (10–20 %) relapse within the first year after orchiectomy alone. The authors had no tumor relapse in those treated by chemotherapy after surgery because they recommended the use of adjuvant chemotherapy for all stages of yolk sac tumors.

Concerning the surgical approach for orchiectomy in these young children, the literature is sparse. Although the studies used only the inguinal approach for all the patients. Authors [5] consider the high inguinal approach as the only one which must be used, with the argument that this inguinal approach gives the advantage of early high spermatic vessels clamping and avoiding the dissimulation of the tumor to the superficial lymph drainage. On the other side, in work [6], describe the scrotal approach as an anatomic, less traumatic, giving direct access, and avoiding the risks of tumor's dissimulations, which may happen by squeezing or rupture of cancer during its manipulation especially in large-sized tumors. In our point of view, the anatomic shortness of the inguinal canal in young children gives no difference in the accessibility for high vascular and cord ligation between the inguinal and the scrotal approaches. Also, the tumor's dissimulation is avoided because of the traumatic acts or unnecessary manipulations before the complete and distant delivery of the tumor out of the scrotum.

Conclusions. Our clinical case indicated the importance of early diagnosis and surgery as rapid as possible. We think that in localized yolk sac tumors of the testis and trans-scrotal approach of radical orchiectomy alone is sufficient.

It is now widely accepted by the majority that there is no need for primary adjuvant chemotherapy after orchiectomy in stage I yolk sac tumors in children. Also, more studies are needed to achieve a conclusion in determination of the superiority of inguinal and scrotal approaches, taking into consideration the potential advantages and disadvantages of each.

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DIFFICULTIES IN DIAGNOSIS OF A COMPLICATED HYDATID CYST OF THE LUNG IN A CHILD

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ТРУДНОСТИ ДИАГНОСТИКИ ОСЛОЖНЕННОЙ ЭХИНОКОККОВОЙ КИСТЫ ЛЕГКОГО У РЕБЕНКА

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Herein, we present a clinical observation of a child with complicated pulmonary echinococcosis. The patient had experienced difficulties with diagnosis, and he was unsuccessfully treated for chronic pneumonia over 1.5 years in a clinic and various hospitals. The description of this case indicates the importance of detailed history taking and obligatory diagnostic tracheobronchoscopy because the radiological signs in cases of a complicated hydatid cyst in the lung in children may be uninformative.

Keywords: complicated hydatid cyst, lung, surgery, children

Приведено клиническое наблюдение, демонстрирующее трудности в диагностике осложненного легочного эхинококкоза у ребенка, который на протяжении 1,5 лет лечился в условиях поликлиники и в различных стационарах по поводу хронической пневмонии. Описание данного случая указывает на важность детального сбора анамнеза, с обязательным проведением диагностической трахеобронхоскопии, поскольку рентгенологические признаки при осложненном эхинококкозе легких у ребенка могут быть малоинформативными.

Ключевые слова: осложненный эхинококкоз, легкие, хирургическое лечение, дети