Original Research Article

Imaging Manifestation and Treatment of Nephroblastoma

Dapeng Song,Zhong Chen,Hanfei Ran

Department of Imaging, Second Affiliated Hospital of Dalian Medical University, Liaoning, China

ABSTRACT

Neonoblastoma is also known as renal embryos, Wilms tumor, originated in the undifferentiated posterior renal embryo base, can form a variety of components of the kidney. It shows Kidney cell tumor accounts for more than 80% of children under 15 years of age with malignant genitourinary tumors, accounting for about 8% of children's solid tumors. Statistics of domestic 6 pediatric hospital 2133 cases of malignant solid tumors, there are 503 cases of nephroblastoma (24%), the diagnosis of age 1 to 5 years old accounted for 75%, the highest age is 1 to 3 years old, the average age is 3.1 year old. 90% of cases diagnosed when the age is less than 7 years old, rare in adults and newborns. Male and female gender and left and right side of the same, bilateral accounted for 1.4% to 10.3%, the average age of diagnosis is 15 months. Abdominal mass is the most common symptoms, about 75% of patients with abdominal mass or abdominal distension treatment. As the lumps at a later time do not affect the nutritional and health of children, and no other symptoms, so more because parents give their children bath or dressing was accidental discovery, and often not the parents attention and delay treatment. Late tumor increased, children by huge tumor oppression, may have shortness of breath, loss of appetite, weight loss, irritability phenomenon. Gross hematuria rare, but microscopic hematuria can be as high as 25%. 25% to 63% of patients may have high blood pressure performance. A very small number of nephroblastoma spontaneous ulceration, clinical manifestations similar to acute abdomen. This study aims to investigate the imaging findings of B-ultrasonography, CT and MRI in nephroblastoma. Methods: Eight patients were examined by this study, and the lesion size, edge, internal structure and enhancement were observed. The results of the examination have the same, but the degree of display and subtle structure is different. Through medical images can be on the examination of the disease can make a diagnosis, MR the most diagnostic value. Comprehensive data can significantly improve the diagnostic accuracy.

KEYWORDS: Nephroblastoma, Medical imaging, CT MRI treatment program

1. Clinical analysis of nephroblastoma

Nephroblastoma (NB), also known as Wilm's tumor, is a complex embryonic kidney tumor, accounting for 6% of all kidney tumors, about 20% of children with malignant tumors. The diagnosis of the disease is generally not difficult, in the continuous development of inspection means today; the diagnosis rate was significantly improved. But the integrated image data is very small, especially the MR reported less. This article is focused on the disease of CT, MRI, ultrasound and diagnostic points to make a discussion.

1.1. Materials

Eight cases of children from December 2010 to May 2011 admitted to hospital were CT, B ultrasound and MRI examination, after surgery, puncture or autopsy pathology to be confirmed. Aged from August to 11 years old, 5 males and 3 females, the tumor occurred in the left 6 cases, the right 2 cases.

1.2. Methods

CT examination machine for the Siemens PIUS4C-type spiral CT machine, using the top of the diaphragm from the continuous scan to the kidneys or mass below the layer thickness / layer 10 / 10mm or 10 / 5mm, intravenous iodine contrast agent (2 mL / Kg), B-use Hitachi EUB-4 type. MRI is using PHILIPS GYROSCAN NT1.0. TSE is sequence, fat-pressed (SPIR) layer thickness / layer spacing 8 / 0.8 mm.

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1.3. Results

CT scan mass density and more uneven, CT value of 10-30HU, slightly lower than the normal renal density, tumor can be seen irregular low density, but also visible high density calcification and fat density shadow. The injection of contrast agent after the edge of the tumor and residual kidney enhancement significantly tumor is enhancement of the lighter. 2 cases see the tumor invasion of renal vascular, renal fat gap disappeared, after abdominal lymph nodes.

B-ultrasound due to different internal structure of the tumor, and the emergence of different levels of echo, echo uneven. Calcification lesions appear high echo spots, the rear appears sound. Also see the Hydronephrosis, ascites, tumor thrombus and liver metastasis.

MRI signal was significantly uneven, T2WI to high signal-based, cystic changes were part of the higher signal, T1WI to low signal-based, cystic signal is lower, bleeding is higher signal, MRI showed normal kidney and kidney The adjacent tissues of renal tumors showed stronger than CT and B-ultrasonography, lymph nodes, tumor thrombus and fat invasion were satisfactory.

Discussion of nephroblastoma malignant epithelial tumor, can occur in any part of the kidney, mostly in the kidney growth, a very small number of occurred in the kidney Clinical manifestations of abdominal painless hematuria, hypertension, hematuria, weight loss and other symptoms, NB originated in the posterior kidney germ, pathological typical tissue images from the kidney germ epithelial cells and sarcomatoid-like stromal cells constitute the two, that is, sarcomatoid mesenchymal mixed with some hypoplasia (embryonic) glomeruli and / or renal tubules. In addition, NB also contains bone, cartilage, nerve tissue and striated muscle and other differentiated tissue, and thus the image performance is complex and diverse. Cystic partial differentiation of NB is a more specific type to form the size of the cyst is characterized by late NB invasion and perforation of renal capsule, direct spread to the liver or other organs were high mortality, violations of lymph nodes and renal vein Or about 50% of the inferior vena cava have a risk of distant (lung, liver) metastasis. Renal vein or inferior vena cava within the formation of tumor thrombus can cause loss of pulmonary embolism to sudden death.

Imaging examination NB have their own strengths, the application should complement each other, B ultra-cheap, economical, fast, safe, no damage, can be used as a diagnostic NB and follow-up of the preferred method. Defects are difficult for bone metastasis and renal function cystic identification. CT resolution is high, tumor thrombus detection rate is high, especially for bleeding and calcification have its advantages. MRI with its high tissue resolution, multi-directional imaging to qualitative, accurate positioning, the renal tissue and tumor internal structure and bleeding, necrosis, liquefaction, cystic change and other highly significant. NB mainly with renal cell carcinoma, polymorphous cystic nephroma, polycystic kidney disease, teratoma and retroperitoneal neuroblastoma identification.

The prognosis of NB, a lot of factors, clinical stage, lymph node metastasis and prognosis are closely related to vascular invasion, lymphadenopathy and distant metastasis prognosis is good, tumor size, location and whether calcification and prognosis is poor.

2. Medical image representation of nephroblastoma

Wilms 'tumor is the most common abdominal malignancy, the incidence of abdominal tumors in children accounted for the fi rst in the tumor occurred mainly in the fi rst 5 years after birth, especially in the 2 to 4 years old. Similar to, 3 to 10% of the bilateral, or concurrent or succession. Gender diff erences between men and women, but most of the report slightly more than women in the individual cases occurred in adults in 1899 German physician Max Wilms fi rst reported the disease, It is known for its name and is known for its name, which is called nephroblastoma, which is developed from the postnatal kidney, and the tumor is composed of extremely similar components of the kidneys.

2.1. How the formation of nephroblastoma, acidic body and the relationship between the nephroblastoma

2.1.1 It causes of the development of nephroblastoma. First, from the mother, in fact, because the parents of the constitution is not particularly good, resulting in sperm and egg combination, the fetus is not normal, the fetus in the mother on the acid and alkali is not balanced, The body's immunity is low. After birth due to external environmental factors, the normal cells easily mutated, and in acidifi ed body fl uids, the mutation of the cells will quickly multiply, and fi nally the formation of tumors.

2.1.2 Congenital malformations associated with nephroblastoma include: WAGR (Wilms tumor, Aniridia, Genital anomalies, mental retardation) syndrome, manifested as Wilms tumor, no iris, genitourinary tract malformations and mental retardation. Patients often chromosome 11p13 deletion; Denys-Drash syndrome, characterized by gonadal development, kidney disease and lead to renal failure is characterized. Genetic abnormalities are mainly WT-1 gene mutation; Beckwith-Wiedemann syndrome, characterized by organ hypertrophy, partial hypertrophy, adrenal

cortical cell hypertrophy, and prone to Wilms tumor and soft tissue sarcoma, often chromosome 11p15.5 deletion The WAGR syndrome and Denys-Drash syndrome are closely related to the occurrence of Wilms tumor, both of which are associated with deletion or mutation of the 11113 tumor suppressor gene WT1 (Wilms' tumor associated gene-1). Beckwith-Wiedemann syndrome patients with 11p15 deletion, many sporadic nephroblastoma also has 11p15 loss of heterozygosity, and 11p13 sites are not involved. It is presumed that at 11p15 there is another gene WT2 associated with nephroblastoma, but there is a further study confirming.

2.2. Histopathological changes of renal cell tumor and its clinical manifestations

2.2.1 The histological features of nephroblastoma are glomerular or tubular-like structures with different developmental stages. The cell composition has three phases, including cells of embryonic progenitor cells, epithelioid cells and mesenchymal cells, reflecting The different stages of the organization. The occurrence of nephroblastoma may be due to the differentiation of the mesenchymal cells into the posterior renal tissue differentiation disorder, and sustained proliferation caused.

2.2.2 Pathological changes

Nephroblastoma showed a single solid mass, the volume is often large and clear boundaries, may have Pseudocapsule formation. A few cases were bilateral and multifocal. Tumor quality soft, cut fish-like, gray or gray-red, may have focal bleeding, necrosis or cystic change, and some visible a small amount of bone or cartilage.

Histological features are naive glomeruli or tubular tubules. Cell components include mesenchymal cells, epithelioid cells and immature cells. Epithelial cells are small, round, polygonal or cubic, can form small tube or small ball-like structure, and can appear squamous epithelial differentiation. Mesenchymal cells are mostly fibrous or mucous, small cells, spindle or stellate, there may be striated muscle, cartilage, bone or fat and other differentiation. Embryonic immature cells are small round or oval primitive cells with less cytoplasmic.

2.2.3 Clinical manifestations and symptoms

Clinicopathological staging and control of the disease, the development of treatment programs and the impact of prognosis are closely related, it is important. After years of observation and research, it is recognized that congenital mesodermal cell renal cell carcinoma often occurs in the infancy; the tissue differentiation is good, often benign process. Cystic nephroblastoma also showed a benign process, the prognosis is better. According to the International Institute of Pediatric Oncology, emphasis on the type of cell tissue for the prognosis of the important relationship, therefore, according to pathological histology can be divided into two types of nephroblastoma.

1 Good prognosis of tissue groups such as typical nephroblastoma, cystic nephroblastoma, and mesodermal cell neoplasms.

2 Poor prognosis of the organizational structure of about 10%, such as undifferentiated nephroblastoma, clear cell sarcoma, and transverse pattern of tumor. Nearly 60% of cases died.

Factors that affect the prognosis in the past that the size of the tumor in the age of sick children, and in the very effective treatment development. Other factors such as infiltration capsule, extended to the renal vein or inferior vena cava, local spread of the kidney, intraoperative ulceration, abdominal transmission, etc., can be seen by the naked eye all the tumor and the application of multi-drug chemotherapy method for treatment. The most important prognostic factors currently considered are tumor tissue structures, complete resection of primary tumors, metastatic lesions and bilateral lesions. Therefore, in recent years, the clinical pathology staging method, for the local spread of the tumor, not as much as before, has shifted from stage III to stage II, lymph node metastasis, because of its poor prognosis, more serious than previously estimated, so from II to III period.

2.3. Nephroblastoma has the following clinical manifestations:

1 abdominal mass early asymptomatic, abdominal mass is often the first symptom, accounting for more than 90%, mostly in the children when the bath accidentally found. The typical symptoms are: weak infant abdomen with large lumps 'Lohan belly'. Mass texture hard, the surface may have nodules, no obvious tenderness, late mass fixed.

2 Low back pain or abdominal pain about 1/3 cases of waist or abdominal pain, can be expressed as local discomfort or colic, may be due to bleeding within the tumor. Such as acute pain accompanied by fever, abdominal mass, anemia, high blood pressure, often under the renal capsule hemorrhage. Intracranial rupture can be expressed as acute abdomen.

3 Hematuria is not common, can occur in the late course of disease. Generally the naked eye cannot be found, but 75% of the cases may have microscopic hematuria.

4 Weight loss, anemia face and irregular fever.

5 Hypertension seen in adult patients and some sick children, due to renal tissue compression, due to excessive secretion of renin.

6 Congenital iris defi ciency rate of about 1.4% is also known as no iris - nephroblastoma syndrome.

7 Other symptoms of the digestive tract can be nausea, vomiting, abdominal distension and other symptoms of obstruction; or lower extremity edema, ascites and varicocele, the Department of tumor due to oppression of the inferior vena cava.

2.4. Clinical pathology

Nephroblastoma has the characteristics of pediatric neoplasms: the occurrence of tumor and congenital malformations has a certain relationship; tumor tissue structure and the origin of embryonic structure is similar; clinical effi cacy is better. The main symptom of nephroblastoma is the abdominal mass, the lower edge of the huge mass up to pelvic cavity. Some cases may occur hematuria, abdominal pain and high blood pressure and other symptoms. Tumor to local growth, can invade the perirenal adipose tissue or renal vein, there may be lung and other organ metastasis. The combined application of surgical resection and chemotherapy has a good eff ect. No long-term survival rate of 90% or more.

2.5. Diagnosis of nephroblastoma

Excretion of urinary tract imaging can be seen kidney shape increases, renal pelvis deformation, elongation, displacement or destruction. Some cases of renal dysfunction or no development at all the need to use high-dose contrast agent angiography. Flat sheet stretched or scattered linear calcification. Ultrasonography helps to identify Hydronephrosis. CT examination helps to determine the extent of tumor invasion. And can be serum erythropoietin determination and serum renin determination. If necessary, can be renal artery angiography, 99mTc-DMSA renal scintigraphy scan and other tests. Pseudon VMA, HVA, serum lactate dehydrogenase (LDH), alpha-fetoprotein (AFP) quantifi cation, and neuron-specifi c enolase (NSE) quantifi cation, etc. can be used to identify bone marrow aspiration and neuroblastoma an examination.

In the caesarean section, the typical seen, nephroblastoma is a substantial, smooth, surface expansion of collateral vessels, slightly blue spherical tumor, part of the kidneys to replace the kidneys, and the kidney shift. Because the tumor is surrounded by high-tension kidney coating, and is brittle and fragile, rich in cell characteristics, should avoid preoperative, intraoperative puncture or incision biopsy, so as not to spread and spread. In addition to the possibility of bilateral tumors, sometimes must be biopsy, especially in the second, third operation, to select the appropriate site. If the diagnosis is a nephroblastoma, fi rst do not panic, must be based on specifi c circumstances to determine how to treat, for a wide range of advice. Generally diffi cult to do surgery, especially the tumor has been oppressed nerve or close to the case of large blood vessels, the proposed conservative treatment, for diet.

3. Diff erential diagnosis of nephroblastoma

3.1. Comparison of nephroblastoma with other cancers

Kidney tumor is a childhood kidney tumor, in the sonogram and there are obvious features, generally not easy to confuse with other kidney tumors, the more close to kidney tumors are kidney cancer, hamartoma and renal rare teratogenic tumor.

Compared with liver cancer, the performance of nephroblastoma echo and liver cancer is very similar, and the right kidney on the pole of the nephroblastoma grow to great, it is also easy to mistaken for liver tumors. At this point must be multi-faceted, multi-section exploration, once found to be squeezed, deformed part of the kidney can be identifi ed.

Compared with kidney cancer, nephroblastoma is the shape of renal cancer rules, clear edges, and contours neat. Internal echo renal cancer is uniform or uneven diff use, small scattered in the echo, nephroblastoma is a rough strong echo. Onion-type hamartoma although the internal echo has the strength of the staggered, but was bright and dark orderly arrangement, nephroblastoma rough echo is no such law. And the edge of the tumor at the edge of the low or no echo with the performance of the hamperoma is not available.

3.2. Identifi cation of nephroblastoma

Pathology

Kidney tumor originated in embryonic kidney tissue (posterior renal embryo base), also known as renal embryos. Kidney tumor is a large multi-lobular tumor, can occur in any part of the kidney parenchyma, generally originated in the

upper pole or the lower pole, often confined to the inflammatory fiber pseudomembrane, the section was even flesh-like, color gray Accompanied by hemorrhagic necrosis and pseudocystic changes, 5 to 15% of the cases have calcification. Typical tumor microscopy can be divided into three phases: residual embryoid, epithelial and stromal cells. Interstitial tissue accounts for the majority of the tumor can evolve into striated muscle, smooth muscle, connective tissue, nerve tissue, mucous tissue, fat, cartilage and other ingredients. Epithelial differentiation is irregular, was glandular structure or shape of the glomerular-like structure. Kidney tumor can be divided into good and bad two histological types, which include focal (less than 10% of nuclear abnormalities) and diffuse (nuclear anomalies more than 10%) intermittent. Indirect has three characteristics, namely: nuclear hypertrophy, nuclear deep staining, and abnormal nuclear division. Kidney cell tumor can penetrate the renal capsule can be extensive infiltration of surrounding tissue or organs, but also invade the renal vein, inferior vena cava, invasive renal pelvis or ureter caused by renal pelvis deformation, hematuria and obstruction. Tumors can be lymphatic transfer to the renal and para-aortic lymph nodes, the blood transfer to the lung, liver, bone, brain.

The most widely used is the NWTS (National Wilms Tumor Study) staging.

Stage I tumors are limited to the kidneys but are fully resected

Phase II tumors are beyond the kidneys, such as capsule involvement, local invasion, tumor thrombosis, but complete resection

Stage III tumors spread to peritoneal and retroperitoneal lymph node metastases

Stage IV blood transfusion (lung, liver, bone, brain)

V-phase diagnosis of the tumor has been violated bilateral

Clinical manifestations

Most of the diagnosis before the age of 5, 2/3 within 3 years of age diagnosis are occasionally in adults. Men and women similar to the incidence are left and right side.

Early asymptomatic to the abdomen mass is the most common, about 80%, rapid mass growth, large, smooth, hard, can cross the midline of the abdomen. 30 to 40% of patients may have abdominal pain, even the performance of acute abdomen. Other manifestations are: high blood pressure, fever (tumor necrosis or associated infection), hematuria, anemia (bleeding within the tumor).

Wilms tumor is closely related to some congenital malformations, such as iris absent, partial hypertrophy, cryptorchidism, hypospadias, etc., often coexist.

Diagnosis

Found that infants and young children with abdominal enlargement of the tumor should be thought of the disease may be. B ultrasound, X-ray, CT, MRI examination can confi rm the diagnosis, peripheral violations and local lymph node metastasis. And further through the relevant imaging examination clear whether the lung, liver, bone, brain and other distant metastases exist. Bilateral neoplasms should be performed with renal artery angiography to determine the size, extent and blood supply of the tumor.

Diff erential diagnosis

Nephroblasts need to be diff erent from other manifestations of abdominal mass, including: hydronephrosis, multiple cysts, repeated renal deformities, adrenal neuroblastoma, teratoma, liver tumors and rhabdomyosarcoma. Imaging examination can be identified. Intravenous urography with renal remodeling prompted the tumor to be renal. The calcifi cation of nephroblastoma is crescent-shaped and distributed around it, while the calcifi cation of Neuroblastoma is fi nely distributed. Neuroblastoma can be transferred to the skull and liver early.

Prognosis

The overall survival rate of nephroblastoma is close to 90%. I, II, and III were 96.5%, 92.2% and 86.9%, respectively. The overall survival rate was 73% for high-risk patients (excluding stage IV or histological dysplasia), and the survival rate of bilateral tumors was 70%. Wilms 'tumor is the most common abdominal malignancy in children, the incidence of abdominal tumors in children accounted for the fi rst place. Tumor mainly occurred in the fi rst 5 years after birth, especially more common in 2 to 4 years old. Nephroblastoma due to the development of embryos from the development of the posterior kidney, the number of men and women is similar to the number of men and women, and the tumor consists of extremely similar components of the kidneys.

4. Treatment of Nephroblastoma

Before treatment, the tumor specificity and prognostic factors should be fully understood, according to specific cases to develop appropriate treatment programs in order to improve the treatment effect. In the course of treatment is to prevent harmful and excessive treatment. After regular treatment, regular follow-up is very important. The combination of chemotherapy and radiotherapy combined therapy, is a recognized treatment. But how to combine and apply the dose as well as the course of treatment, so that the most harm to achieve the highest efficacy of the purpose is worthy to further study.

Nephroblastoma is one of the earliest and best solid tumors in the application of surgery, radiotherapy and chemotherapy. The combination of nephroblastoma is the key to improving the survival rate, and multidisciplinary collaborative therapy is the most effective mode of comprehensive treatment, NWTS stipulates that the surgeon's task in this mode is:

1: Surgical resection or biopsy of the tumor to establish the diagnosis.

2: Through the liver, lymph nodes and contralateral kidneys were assessed to establish tumor staging.

3: To avoid tumor rupture, reduce postoperative radiotherapy.

4.1 Medical treatment of nephroblastoma

For surgery that cannot be performed (the patient's general condition cannot tolerate radical surgery) and cannot be removed (tumor is huge or should cause injury and cannot be surgically removed) and high staging of the nephroblastoma, through this model, can make the feasibility of surgery and comprehensive. The survival rate of treatment can be greatly improved. The details are as follows:

Surgical treatment

By abdominal surgery, check the contralateral kidney and liver, if suspicious tumors, to take the living tissue examination. Blood vessels with vascular disorders are soft and brittle, easy to rupture, the operation should be gentle, so as not to tumor crowded (intraoperative tumor ulceration, local recurrence chance than the ulceration is more than doubled). NWTS proposed to remove the renal pedicle or aorta, vena cava lymph nodes cannot change the prognosis, but careful examination and selection of lymph node biopsy useful for tumor staging. Such as renal vein tumor thrombus, to be cut out of tumor thrombus and then ligation of renal pedicle which does not mean that the prognosis is poor and In dealing with the huge tumor of the kidney pedicle to be extra careful to avoid accidental injury to important blood vessels. Such as tumor invasion and mesenteric root, duodenum, pancreatic head site, if still intact resection of the tumor, will take a great risk, it should be suspicious tumor residual parts of the silver clip mark, and the estimated tumor is too large, cannot be removed Of the same cases, first with radiotherapy, chemotherapy, 3 to 6 months after the second exploration.

Radiotherapy

Nephroblastoma is very sensitive to radiotherapy, in recent years due to chemotherapy, in many occasions, no radiotherapy. Radiation dose of NWTS-3 to high-risk patients with nephroblastoma:

Age (Months)	Total radiotherapy (CGY)
Born~12	1,200~1,800
13~18	1,801~2,400
19~30	2,401~3,000
31~40	3,001~3,500
>40	3,501~4,000

Preoperative radiotherapy for giant Nephroblastoma, 6 to 8 days to 800 ~ 1200CGY, 2 weeks can be seen tumor shrinkage, and then surgery. Postoperative radiotherapy in 48 hours after surgery and 10 days after the start has no

significant difference in efficacy. Early radiotherapy does not affect incision healing, but not later than 10 days, or increase the chance of local recurrence.

Chemotherapy

Commonly used drugs are vincristine (Vincristine, VCR) Actinomycin D, also known as Bactamycin (Actinomycind, ACTD) and Doxorubicin (Doxorubicin, Adriamycin, ADR), treatment programs vary.

VCR: 1.5mg / (m2 · w), 1mg dissolved in 20ml normal saline, intravenous injection, a total of 10 weeks, and then every 2 weeks intravenous injection as a maintenance. 1 year old baby in addition to the first dose, then reduced to half the amount of available 1mg / (m2 · w), single dose 2mg.

ACTD: 15 μg / (kg · d) × 5 or 12 μg / (kg · d) × 7. ACTD200μg dissolved in 20ml of saline, intravenous injection. The first and second course of treatment interval of 6 weeks combined with after every 3 months a course of treatment. 1 year old baby with half the amount of a single pole is 400μg.

The two drugs compared, VCR is better than ACTD, its advantages are two: VCR toxicity is small, mainly neurotoxicity such as deep tendon reflex, muscle weakness, etc., does not affect the blood. Children have no adverse reactions or only 2 to 3 days of fever and loss of appetite. At present, we encountered in the clinical diagnosis of Nephroblastoma children began to inject VCR. to prevent tumor recurrence and metastasis, VCR better.

VCR and ACTD are excreted by the liver, so in the course of medication should check liver function. Although VCR is better than ACTD, the two drugs are used with a single drug alone.

ADR: 40 ~ 60mg / m2, divided into 2 to 3 days intravenous injection, interval 4 weeks, can be repeated administration. Children under 5 years of age should be less than 300mg / m2, 5 to 10 years old children up to 400mg / m2, 2 years of age children should be used with caution, in addition to myocardial toxicity, but also susceptible to infection. Adr on the clear cell sarcoma significant effect.

4.1.4 NWTS-IV treatment program (see table).

Table NWTS-IV Treatment Regimen

	Condition	Surgery	Radiotherapy	Chemotherapy
Phase I		+	-	ACTD+VCR 24 Weeks
Phaseii	Good Prognosis of Organizational Structure	+	-	ACTD+VCR 65 Weeks
Phase iii	Good Prognosis of Organizational Structure	+	1080CGY	ACTD+VCR +ADR 65 Weeks
Phase iv	Good Prognosis of Organizational	+	1080CGY	ACTD+VCR +ADR 65 Weeks

	Structure			
Transparent Cell Sarcoma Each Period	Poor Prognosis of Tumor Tissue Structure	+	1080CGY	VCR+ACTD+ADR 65 Weeks
ii～iv Period Undifferentiated	Poor Prognosis of Tumor Tissue Structure	+	1080CGY	VCR+ACTD+ADR 65 Weeks
Lung Metastases	Single Shot	Surgical Resection		
	Multiple Shot	Lung Radiotherapy		

For the huge nephroblastoma estimated surgical resection diffi cult or suspected tumor has invaded the inferior vena cava, preoperative chemotherapy can make the tumor shrink such as chemotherapy alone is not signifi cant, then plus radiotherapy, can reduce the chance of intraoperative tumor proliferation, misdiagnosis rate of up to 5% to 10%.

Recurrence and treatment of metastatic tumors also apply surgery, radiotherapy, chemotherapy combined measures. In addition to the above three drugs, can still use cisplatin, cyclophosphamide, etoposide (Etoposide, VP16, VP16-213), etoposide (Teniposide, VM26) and so on. With lung metastases after treatment, the survival rate of up to 50% to 60%, more difficult to deal with abdominal recurrence. Even if the prognosis of a good organizational structure, after 15 months of comprehensive treatment only metastases, 90% can still be treated to survive, but the diagnosis of 6 months after the transfer, the survival rate of only 28%. In any case, there are reports of seven metastases, including the abdomen, chest by the comprehensive treatment of survivors.

Bilateral nephroblastoma

Bilateral nephroblastoma diagnosis of age than the unilateral small, with malformations and cell defects in the opportunity than the single large 10 times. Application of modern imaging techniques and the fi rst operation to explore the contralateral kidney can be found early contralateral tumors.

Bilateral nephroblastoma treatment is to maximize the retention of renal tissue, so the least before surgery with VCR and ACTD4 weeks, so that the tumor shrink, if not eff ective can be added doxorubicin and radiotherapy 1500CGY, application of image monitoring to monitor Choose the appropriate time, re-exploration surgery. NWTS-III suggests that transhepatic exploration, such as a good prognosis of the organizational structure (poor prognosis of the organizational structure of only 12%), only bilateral biopsy, including lymph node biopsy. If you can keep the kidney in more than 2/3, do tumor resection biopsy rather than nephrectomy. It must be done bilateral nephrectomy and kidney transplantation, the application of chemotherapy drugs in 2 years later, so as to avoid tumor recurrence. PENN reported that 15 cases of bilateral nephroblastoma in the withdrawal of a year to do kidney transplantation, 7 cases of tumor recurrence; the other 5 cases in chemotherapy after 2 years of kidney transplantation without recurrence of tumor recurrence. According to the above diagnosis and treatment, in the NWTS in the same period the diagnosis of survival rate of up to 87%, compared with the diagnosis is reduced to 40%. And bilateral nephroblastoma structure may not be the same, so the two were sent to the pathological examination.

Traditional Chinese medicine treatment

According to the patient can choose some with anti-cancer, enhance immunity, relieve the pain of patients with traditional Chinese medicine with the treatment:

Cordyceps sinensis: Cordyceps sinensis fungus Cordyceps sinensis parasitic in the bat moth insect larvae on the sub-seat and larvae of the body complex, more species, Cordyceps sinensis is a traditional valuable nourishing Chinese herbal medicines, the main components include Cordyceps , Cordyceps, amino acids, sterols, mannitol, alkaloids, vitamins B1, B2, polysaccharides and minerals. Anti-cancer, nourishing, immune regulation, antibacterial, sedative and

hypnotic effects. Traditional medicine 'Materia Medica new' records: 'sweet and warm, secret essence of Qi, dedicated to life.' Modern medical research confirmed that its composition contains fat, refined protein, fine fiber, Cordyceps, Cordycepin and vitamin B12, common The use of anti-tumor, improve immunity, improve cell capacity, improve heart function, regulate the respiratory system, kidney function, improve hematopoietic function, regulate blood lipids, regulatory function. Which anti-tumor effect and improve immune function at the same time for the treatment of clinical malignant tumors can achieve very good results. Mainly used in patients with nasal cancer, pharyngeal cancer, lung cancer, leukemia, brain cancer and other malignancies.

March: the taste of the sweet, slightly bitter, slightly warm. It indicates stasis bleeding, blood swelling and pain. Attending a variety of bleeding card, fall servant bruises, chest pain heartache. Modern pharmacy research, notoginseng saponin Rd can make cultured tumor cells 92% inhibited, Rd on the cultured tumor cells also significantly inhibited. Saponins Rhl can inhibit the growth of mouse melanoma (B16), so that cancer cells re-differentiation induced into non-cancer cells. Sanqi Decoction in vivo inhibition of JYC26; Panax in the polysaccharide in the body can significantly inhibit the mouse sarcoma -180; March 7 also anti-phage activity.

There are many ways to treat Nephroblastoma, there are surgical therapy, chemotherapy and therapeutic methods, but these methods have the possibility of recurrence after treatment. Some treatment of Nephroblastoma diet, can fundamentally improve the patient's acidic body, eat alkaline food, you can kill the tumor from the source cells, reduce the recurrence and metastasis of Nephroblastoma.

Sometimes surgical therapy and chemotherapy cannot reduce the suffering of patients with Nephroblastoma, in fact, because there is no real reason to find rehabilitation, that is, body fluids are acidified, acidic body fluids do not change, mutation cells will not die, which is why The reason for the recurrence and recurrence of cancer cells after surgery and chemotherapy. To cure Nephroblastoma have to improve their body from the beginning, from the source dead tumor cells. Eat alkaline foods; improve their own acidic body, while supplementing the body must be organic nutrients, so as to starve the tumor cells at the same time, to restore their own immunity.

Common acidic foods and alkaline foods are:

1. Weak acid foods: white rice, peanuts, beer, wine, fried tofu, seaweed, clams, octopus, loach.

2 in the acidic foods: ham, bacon, chicken, tuna, pork, eel, beef, bread, wheat, butter, horse meat and so on.

3. Strong acidic foods: egg yolk, cheese, sugar to do the West Point or persimmon, black roe, firewood and so on.

4. Weak alkaline foods: red beans, radish, apples, cabbage, onions, tofu and so on.

5. Alkaline foods: radish dry, soybeans, carrots, tomatoes, bananas, oranges, melon, strawberries

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