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Spinal Tumor In Children

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Abstract: A spinal tumor is an abnormal growth that results from any tissue that makes up the spinal cord. Spinal cord tumors are benign or malignant growths in or near the spinal cord. They are less common in children than brain tumors and occur primarily in children 10 to 16 years old. Spinal cord tumors may arise from the spinal cord region (primary) or spread to the cord from other organs (metastatic). As you can see, our article is about spinal tumors in children.

Keywords: Spinal tumor, cerebrospinal fluid, cranial nerves, brain cancer, malignant tumor, fatal damage.

1. INTRODUCTION

Brain and spinal cord tumors are large numbers of abnormal cells that grow out of control in the brain or spinal cord. In most other parts of the body, there is an important distinction between benign (non-cancerous) tumors and malignant (cancerous) tumors. Benign tumors do not invade nearby tissues or spread to distant areas, and they hardly endanger the lives of other parts of the body. Malignant tumors (cancers) are so dangerous mainly because they can spread throughout the body. Brain tumors rarely spread to other parts of the body, although many of them are considered malignant because they can spread through the brain and spinal cord tissue. But even so-called benign tumors, as they grow, can compress and destroy normal brain tissue, which can cause serious or even fatal damage. Since the distinction between benign and malignant tumors is not important in the brain, doctors often say "brain tumor" instead of "brain cancer." Brain and spinal cord tumors in children are often different from those in adults. They usually form in different places, develop from different types of cells, and can have different treatments and prognoses (outlooks). Brain and spinal cord tumors are a large number of abnormal cells that grow out of control in the brain or spinal cord. In most other parts of the body, there is an important distinction between benign (non-cancerous) tumors and malignant (cancer) tumors. Benign tumors do not invade nearby tissues or spread to distant areas, and they hardly endanger the lives of other parts of the body.

Main part

Malignant tumors (cancers) are so dangerous mainly because they can spread throughout the body. Brain tumors rarely spread to other parts of the body, although many of them are considered malignant because they can spread through the brain and spinal cord tissue. But even so-called benign tumors, as they grow, can compress and destroy normal brain tissue, which can cause serious and sometimes fatal damage. Because the distinction between benign and

malignant tumors is not so important in the brain, doctors often say "brain tumor" instead of "brain cancer."

Understanding brain and spinal cord tumors helps to understand the normal structure and function of the central nervous system (CNS), which is the medical name for the brain and spinal cord. The brain is the center of thought, feeling, memory, speech, sight, hearing, movement, etc. Special nerves in the spinal cord and head (called cranial nerves) transmit information between the brain and other parts of the body. This information tells how our muscles move, transmits information collected by our senses, and helps coordinate the functions of our internal organs. The brain is protected by the skull. In addition, the spinal cord is protected by the bones (vertebrae) of the spine. The brain and spinal cord are surrounded and protected by a fluid called cerebrospinal fluid. The cerebrospinal fluid is made up of the choroid plexus, which is located in a space in the brain called the ventricle. The ventricles and the space around the brain and spinal cord are filled with cerebrospinal fluid. Many different types of tumors can occur in the brain and spinal cord. When doctors are trying to determine the best way to treat a tumor and the possible prognosis (prospect), several factors are important. The type of tumor (depending on the cell type from which it originated): A tumor can form in almost any type of tissue or cell in the brain or spinal cord. Some tumors have multiple cell types. Different types of tumors often start in certain parts of the brain or spinal cord and tend to grow in certain ways.

Tumor grade: Certain types of brain and spinal cord tumors are more likely to grow in nearby tissues than others. According to the appearance of tumor cells under the microscope, brain and spinal cord tumors are usually divided into 4 grades. The higher the grade, the faster the tumor may grow: Lower-grade tumors (grade I or II) tend to grow more slowly and are less likely to grow (invade or infiltrate) nearby tissues. Higher-grade tumors (grade III or IV) tend to grow rapidly and are more likely to grow into nearby tissues. These tumors usually require more intensive treatment. Genetic changes in tumor cells: Even for a specific type of tumor, the genetic changes in tumor cells may be different. For example, many types of tumors now divide based on whether a cell has a mutation in one of the IDH genes. For certain types of tumors, tumors with IDH mutations tend to have a better outlook than tumors without mutations. Other genetic mutations are also important for certain types of tumors. The location of the tumor: The location of the tumor in the brain and spinal cord affects what symptoms it causes and what is the best treatment. Compared to adults, brain tumors in children are more likely to start in the lower parts of the brain, such as the cerebellum and brain stem. But they can also start from the top of the brain.

2. CONCLUSION

We conclude this article with basic statistics on brain and spinal tumors in children. Brain and spinal cord tumors are the second most common cancer in children (after leukemia). They represent about a quarter of childhood cancers. More than 4,000 brain and spinal cord tumors are diagnosed in children and adolescents each year. The incidence rate (the number of tumors per 100,000 children) has not changed much in recent years. Malignant (rapidly growing) brain and spinal cord tumors are slightly more common in boys, while non-malignant tumors are slightly more common in girls. About three-quarters of children with brain tumors (all types combined) survive at least 5 years after being diagnosed. However, depending on the type, location, and

other factors of the tumor, the prognosis may vary greatly. Obtain survival information for specific types of tumors.

Spinal tumors in children are rare lesions that demand a thorough understanding of their main characteristics for their proper management. Understanding the nuances of spinal tumors in children is of paramount importance for improving outcomes and chances of cure.

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