Example of essay on spina bifida

Health & Medicine, Pregnancy

Spina bifida is a birth defect involving the incomplete development of the spinal cord or its coverings. Normally, it occurs towards the end of the first pregnancy a time when both sides of the embryo’s spine do not succeed to join together thereby resulting in an open area. There are also cases when the other membranes or the spinal cord may push through this opening in the back. This condition however is detectable before the baby is born and it can be treated right away. It is the most common of a group of defects known as neural tube defects which basically is the structure of the embryo that develops into the spinal cord and brain.

- Types of Spina Bifida

Causes of spina bifida are unknown although some evidence suggests that there is a possibility of genes playing a role, where in most cases there is no familial connection. During pregnancy, a high fever could increase chances of a woman having a baby with spina bifida. Also, there is an increased risk of having a baby with spina bifida particularly for women with epilepsy who have taken the valproic acid drug to control epilepsy. There are two forms of spina bifida; spina bifida manifesta and spina bifida occulta (Diseases 135). Spina bifida occulta; It is actually the mildest form of spina bifida. The term ’Occulta’, means hidden, which means that the defect is not open but covered with by the skin. The majority of the children with this particular condition do not have health problems and their spinal cord is usually unaffected. If the hidden defect is severe, some may have numerous symptoms.

Spina bifida manifesta; This type includes,

Meningocele; This defect involves ‘ meninges’, the membranes responsible for protecting and covering the spinal cord and the brain. If in the vertebrae the meninges push through the hole, then this defect is formed.

Myelomeningocele; This is actually the most severe form of spina bifida which occurs when the spinal cord pushes through and the meninges push through the hole in the back. The majority of the babies born with this type of spina bifida also has a certain fluid accumulating around and in the brain. Due to the damage done and the abnormal development of the spinal cord, a child suffering from myelomeningocele normally has some kind of paralysis. Seemingly, the degree of this paralysis mainly depends on the particular area in the spine where the opening occurs. The more severe the paralysis tends to be, the higher the opening. Most often, children with spina bifida have problems with bladder and with bowel control, while others seem to have attention deficit hyperactivity disorder (ADHD) including other difficulties associated with learning such as eye and hand coordination problems. Spina bifida could cause intellectual and physical disability which ranges from mild to severe. However, its severity majorly depends on whether part of the nerves and spinal cord are affected, and the location and size of the opening in the spine (Özek 117).

- Causes

Causes of spina bifida have not been understood yet. During the 1st month of life, the baby developing in the womb ‘ embryo’ develops a structure known as the neural tube which eventually forms the nervous system and the spine. Scientists believe that both environmental and genetic factors act

together to causing this disorder as well as other NTDs. Studies show that 95% of babies with this disorder are normally born to parents who have no family history of these disorders. In addition, women with diabetes or those who are obese are more likely to bear a child with spina bifida. However, there are risk factors that have been identified; the most significant of them is the lack of folic acid before and during the first phase of pregnancy. Possible complications associated with spina bifida results from the production of too much amniotic fluid which is caused by swallowing reflex of the baby. If the water breaks and comes out fast, there are increased chances of placental abruption.

- Symptoms

A child’s symptoms largely depend on how severe the defect is. With a mild defect, a child could develop symptoms or problems or they could also have a birthmark, a dimple or a hairy patch on their back. In severe cases, nerves may come out of the child’s back or swelling on the spine. Children with severe defects could have nerve damages which could affect their daily lives. Additionally, these children could have no or little feelings in the feet, legs or arms and also, they could not be able to move those ill parts of the body. Children who are born with a severe defect are in some cases born with fluid build-up in the brain which is known as hydrocephalus. After birth, these children could have problems which could cause intellectual disability, seizures or sight problems. In some cases, some children get ‘ scoliosis’ a curve in the spine.

Major symptoms of spina bifida are;

- Reduced sensation particularly in the lower body, feet and legs causing leading to pressure sores and possibility of burns
- Arnold Chiari malformation and hydrocephalus
- Learning difficulties
- Degree and types of urinary incontinence
- Types and degrees of urinary incontinence
- Abnormal joints
- A degree of paralysis of the lower body and legs
- Diagnosis

Spina bifida can be diagnosed during pregnancy or probably after the baby is born. During pregnancy, screening tests serve as prenatal tests to check for birth defects including spina bifida. Among these prenatal tests are;

AFP-AFP: This stands for alpha-fetoprotein, a certain protein that is produced by the baby. It is a simple blood test which measures the amount of AFP passed into the mother’s bloodstream from the baby. In addition to that, a high level of AFPA could mean that the baby really has spina bifida.

Ultrasound: An ultrasound is basically a type of picture of the baby. There are cases when the doctor can find reasons that there could be a high level of AFP or can actually see if the baby has spinal bifida. After this diagnosis, spinal bifida can be seen frequently with this test.

Amniocentesis: For this test, the physician or doctor takes some sample of the amniotic fluid which surrounds the baby in the womb. The baby could have spina bifida if there are higher than average levels of AFP.

After the Baby is born

Spina bifida in some cases might not be diagnosed until the baby is born. A doctor could use an image scan like the MRI or the X-ray to view the baby's bones in the back and spine better if there is a hairy patch of a dimple or skin on the back of the baby. In other cases, spina bifida is not diagnosed until the baby is born for reasons that an ultrasound did not show clear pictures of the particular part that is affected by the spine.

- Treatment

Treatment options include;

- Surgery – could be used to reduce the risk of infection and close the lesion
- Shunt Insertion – Hydrocephalus is treated by inserting a tube known as a shunt into the ventricles in the brain. This is where spinal fluid is produced which allows excess cerebro-spinal fluid out of the brain .
- Bladder surgery - this operation is done to tighten muscles and increase bladder size
- Orthopedic surgery – children with spinal bifida normally undergo operations of the feet and legs in order to improve mobility (Watson 341).

A number of different treatments can be used to treat conditions or symptoms associated with spina bifida. Though not all people born with spinal bifida have the same needs, treatment is different for each individual. Certain people have more serious problems than others. Treatment options include;

Occulta; There is no treatment for this condition. However, the majority of individuals never realizes that indeed they are affected unless they are

diagnosed for some other reasons during an X-ray. Surgery is occasionally recommended to prevent these problems.

Meningocele; This defect is surgically prepared and affected babies normally have no paralysis.

Myelomeningocele; It requires surgery within 24-48 hours after birth. Physicians and doctors insert the exposed spinal cord and nerves back inside the spinal cord while covering them with skin and muscle. Punctual surgery assists in preventing additional infection and nerve damage. Immediately after the surgery, a physical therapist teaches parents various ways of exercising their baby’s feet and legs in order to prepare for walking with crutches and leg braces.

Prevention

Vitamin AB also known as folic acid can greatly help in preventing spina bifida as well as other NTDs. Eating healthy includes, eating certain foods that are fortified with foods and folic acid which contain foliage (natural form of folic acid which is found in foods). Women with babies with spina bifida ought to consult a health care provider before getting pregnant for a second time about the exact amount of folic acid to take. Persons with this disorder ought to take 400 micrograms of folic acid each day. Women who at one time had a pregnancy affected by spina bifida ought to talk to their doctor concerning a prescription to take 4, 000 mg. In some cases, folic acid has been found to prevent spina bifida. Individuals with medical conditions such as obesity and diabetes should ensure that it is under control before getting pregnant. People are advised to avoid overheating their bodies like in saunas or when using a hot tub (Wynbrandt 412).

Things to Remember

Spina bifida is among the most common birth defects with a worldwide incidence of 2 cases per one thousand births on average. It happens in the 1st few weeks of pregnancy just before a woman is aware of her pregnancy. Though folic acid does not guarantee that a woman would have a healthy pregnancy, taking folic acid could greatly help in reducing the chances of having a pregnancy that is affected with spina bifida. Since most of the pregnancy is un-planned, it is of paramount importance that every woman who becomes pregnant takes folic acid during pregnancy and before pregnancy.

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