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Multidisciplinary Team Support for Psychological Aspect of Osteosarcoma Amputation in Children: A Case Report

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ABSTRACT

Introduction. Osteosarcoma is the most common primary bone tumor in children. The current management is the surgical method (amputation) and continued chemotherapy. When someone is expected to do this treatment, there will be various possible psychological reactions occur. This amputation condition will affect psychological symptoms both before and after the procedure. Case presentation. A girl, Ms. D, seven years old, first grade of elementary school, planned to be amputated with a diagnosis of right tibia proximal osteosarcoma. The patient is a child the second of 3 siblings. The patient was taken to Dr. Soetomo General Hospital, after checking at the hospital in Ponorogo, then a referral was given for further treatment. Patient is referred because the swelling in the right knee is getting bigger day by day. The patient is being treated and will be planned for surgery with a diagnosis of proximal osteosarcoma right tibia. The patient is consulted by a psychiatrist for assistance considering the patient will be carried out right leg amputation surgery. Conclusion. Chemotherapy with various side effects will also have an effect on the psychological condition of the patient. So there is a need for full involvement multidisciplinary in dealing with pediatric patients with osteosarcoma that will be carried out amputation to obtain optimal therapeutic results.

1. Introduction

As the most frequent primary cancer of the bone, osteosarcoma is a serious medical condition. It is characterized by the presence of malignant mesenchymal cells that create osteoid or bone cells, which are responsible for the formation of bone. Osteosarcoma is a cancer that affects youngsters only rarely. It is believed that it accounts for less than 5 percent of all cancer cases in children under the age of 15 worldwide.¹⁻³ This time last year when it comes to late childhood or early adolescence, the majority of these occurrences occur. Following amputation, there is a period of rapid bone development. Various types of chemotherapy will be used, each with its own set of side effects in accordance with the patient's

psychological status. As a result, complete participation is required. Using a comprehensive approach, the treatment of pediatric osteosarcoma patients will be carried out. Amputation is necessary in order to provide the best therapeutic results. Osteosarcoma of low grade there is a high level of malignancy that is particularly easy to spread. The femur is ranked first on the list of the most common tumor sites. The proximal tibia, proximal humerus, and proximal fibula are the next bones to be reached distally.

Therapeutic treatment for osteosarcoma is a severe cancer that destroys most of the muscles and bones in its path to spread. Some people had to have their limbs

amputated as a result of radiation. The use of radiation in conjunction with some patients will almost certainly result in amputation. There are several options available to someone who has been told by a doctor that he or she will have a limb amputated. There are several different types of reactions that can occur if the amputation has been performed, the outcome is different. It is planned in advance, occurs in the setting of a persistent medical ailment, or occurs as a result of a traumatic event. This is a traumatic event that happened all at once. Having limbs amputated results in elevated levels of anxiety and despair as well as emotional stress. The process of adapting to these events is subject to a huge number of alterations.^{4,5}

Physical difficulties such as reduced physical function, the use of prostheses, discomfort, changes in employment status and other symptoms are common among the elderly. The way you see yourself changes. The circumstances surrounding this amputation will have an impact on both psychological diseases. Before and after amputation are two different things. Depression, anxiety, and other psychiatric problems are among the most common. The presence of post-traumatic stress disorder (PTSD) will be a predictor of poor quality of life. As a result of the radiation, some people were forced to have their limbs amputated. An amputation will almost probably follow from the use of radiation in conjunction with some patients treatment.^{6,7}

Early detection and intervention, there is some evidence that therapy for psychological disorders is useful in preventing the psychiatry disorder in patients who have had limbs amputated. The loss of limbs is a significant developmental obstacle, adolescents and youngsters are included. The loss of a limb will have an impact on both the functional and physical aspects of one's life children's capacity to move around, when compared to their friends, they are more likely to touch, play, and interact with their environment, he had no life experience at his young age. It is also possible to lose limbs, it has an impact on the emotional and social functioning of youngsters.

The requirement for physical activity in children and adolescents, the number of people who have accepted the group is really large. As a result, the emphasis will be on body image. increasing at this point in time. Visible alterations as a result of amputation, as well as a dread of social stigma. The pressure they will feel from their peers will be a big stressor on their development, what it's like to be a teenager. So there is a need for assistance, psychologically before and after the operation is carried out to get the best results.⁸

2. Case Presentation

A girl, Ms. D, seven years old, first grade of elementary school, planned to be amputated with a diagnosis of right tibia proximal osteosarcoma. The patient is a child the second of 3 siblings. The patient was taken to Dr. Soetomo General Hospital, after checking at the hospital in Ponorogo, then a referral was given for further treatment. Patient is referred because the swelling in the right knee is getting bigger day by day. The patient is being treated and will be planned for surgery with a diagnosis of proximal osteosarcoma right tibia. The patient is consulted by a psychiatrist for assistance considering the patient will be carried out right leg amputation surgery. The patient has a fear of being operated on and having her leg cut off. The patient began to lose his appetite, was fussy, and sometimes it was difficult to sleep at night, according to her mother.

3. Discussion

The optimal treatment for osteosarcoma is a combination of chemotherapy and radiation. Radical surgery and even amputation. Amputations are performed on adults. They have lower depression and anxiety scores than younger people, as well as parents. One of them is because of hope and lower needs than the young after amputation.

Amputation derives from the Latin word "amputare," which roughly translates as "beheaded."According to the definition, amputation is the act of removing a part of the body, all of one's

extremity, this activity is one that is carried out in the presence of certain conditions. When all other options for treating organ issues that manifest themselves in the extremities have been exhausted, when the organ can be restored using alternative means or when the state of the organ is potentially harmful, the overall health of the client's body can cause damage to other organs, such as the heart.¹⁻² Infectious problems are a concern, despite the fact that amputation is utilized as a last option in some cases, some people have a long-term effect experience that they want to share with others. It negatively affects one's psychological and emotional wellbeing. Amputations in children requiring surgical intervention can be divided into two types: traumatic and nontraumatic. The infection might be caused by traumatic wounds or it can be caused by biological causes. Reason Amputations in children requiring surgical intervention can be categorized into two types: It can come from a traumatic wound and can also be caused by biologic factors. The incidence of amputations due to traumatic injuries in the pediatric population is increasing. Those resulting from biologic amputations and accompanied by. The majority of traumatic elements are caused by electric shock or car collisions. Factors Because of inherited problems or disease-related factors such as cancer, biology is a result of evolution.

On the other hand, In 2016, an estimated 15,380 new cases of cancer in children and adolescents were diagnosed in the United States, all of whom were under the age of 20. Tumors of the bone, such as Ewing's sarcoma, account for approximately 3% of all cancers, or 461 cases. as well as osteosarcoma. This is the most often encountered type of amputations are required in the case of several of these malignancies. Treatment progress is being monitored continuously rises will also result in an increase in the average survival rate among children and teenagers. As a result, these children and adolescents must learn to regulate their emotions as well as their physicality, it has been deprived of its limbs.¹⁻⁵

When a doctor informs a patient that he or she will have a limb amputated, there are a variety of possible

reactions depending on whether the amputation was intended or the form of the amputation. The patient's attitude to this will be largely influenced by the nature of the situation. This is a serious situation, depending on whether the amputation was planned ahead of time or occurred during the procedure, in the context of a persistent medical disease, or when infection or acute trauma necessitates it. The circumstances surrounding this amputation will have an impact on the psychological symptoms that arise during the rehabilitation period. The loss phase and classical behavioral theory would have been visible if there had been a lag interval while waiting. Kubler Ross is a phase that the patient will go through that includes the following elements: phase of denial phase, angry phase, bargaining phase, despair phase and acceptance phase. The denial phase is the first stage of the grieving process. The refusal to disclose his illness or to ask questions is a common manifestation of this condition and learn about the illness as well as the course of action to be followed, the angry phase can be avoided. The manifestation of wrath aimed towards the medical staff, the haggling with the insurance company, etc. When attempting to prevent or delay amputation, the despair/depression phase might manifest itself in a variety of ways. And lastly, acceptance that can be achieved till the patient expresses a desire to participate in the rehabilitation program.⁶⁻⁷

Zaid et al. conducted a study in Jordan in 2008 on the effects of smoking on Anxiety was shown to be prevalent in 37 percent of 56 patients who had their limbs amputated. 8,9 Depression can be reduced by as much as 20%. Other research has revealed that those who have had their limbs amputated have a higher risk of developing diabetes. I suffer from a variety of mental health issues, including being angry, introverted, feeling helpless, and others. diminished self-assurance, a negative attitude from his family that should be corrected. In addition to providing assistance, it will have a detrimental impact on the adaption process, the person in question. Anxiety manifests itself in this situation as restlessness in

various forms, decreased ability to sleep, pondering, and social disengagement are all symptoms of bipolar disorder. This patient began to have problems sleeping and was irritable after a while. Sensitive to one's own attitude patients may also have negative attitudes toward people with impairments that they have received from others. This may initially be exhibited by a refusal to accept assistance from others in some instances, or a display of indifference to issues that are important to you it's an illness. The onset of depression after amputation may be caused by an adjustment reaction following the amputation. Surgery and impairment occurred all at once. The majority of the time, supportive therapy can be used to address this condition. Medical rehabilitation and short-term antidepressant treatment for a period of several months are recommended. Patients require psychological assistance in order to cope with the stress caused by hospitalization and rehabilitation long-term, as well as changes in way of life. Patients require time to adjust to their new situation. Their thoughts and feelings about the impending irreparable loss, the reactions that appear can be difficult to understand at times. According to reports, it will manifest itself as open and angry melancholy. Amputation It not only results in the loss of a physical part of the body, but it also results in the loss of harmony. Individual psychology is defined as follows, it is often characterized by high levels of stress, worry, and tension. Helpless, feeling worthless, confidence and self-esteem eroding, unable to change the situation, this might lead to negative emotions and eventually social isolation. Amputation It not only causes the loss of a part of the body but also a loss of harmony psychology of the individual. It is generally characterized by stress, anxiety, and helpless, feeling useless, self-confidence and self-esteem decrease, can't control it. emotions and, ultimately, social isolation.¹⁰⁻¹¹

In the instance of amputation, there are a number of maladaptive coping techniques that are frequently employed, including the following, overcompensation, capitulation (surrender), or avoidance are all possible

outcomes. Overcompensation can manifest itself as aggression or exaggerated self-expression, whereas undercompensation is characterized by apathy. Surrender can manifest itself in the form of being sick all of the time and being unable to work. He requires a significant amount of care, yet he is adamant about not having surgery. rehabilitation. Adaptive avoidance in a maladaptive manner social disengagement can be used as a coping mechanism. Coping what works is a sense of humor, as well as creating goals for what can be accomplished and make an effort to resolve the issues that have arisen. Taking this into consideration, it is vital to patient follow-up to support the patient in coping with the circumstance and being able to function normally make use of excellent coping strategies. It is possible for a character who is close to the patient to make him more accepting of the patient's condition. It is also possible to achieve this by picturing pleasant things in one's life after surgery. Affected will also be the patient's ability to cope with the consequences of the amputation itself. Pain, level of handicap, cultural concerns, presence of social support, and reactions from carriers are all considered. and loved ones, as well as the patient's ability to cope at the time of the pre-amputation visit.¹²⁻¹⁴

In this case, the patient is very close to his mother, who plays a role other than as a caregiver. loved ones, the presence of a mother who always accompanies the patient by her side and the pain That is not felt after the amputation increases the patient's ability to rise. returned after amputation. When preparing to return home, it is vital to assess the condition of the house in order to ensure its safety. The patient's occupational therapy should be discussed with the patient and his family while he is receiving treatment education regarding the type of living situations that the patient can tolerate. Patients and their families are dedicated to patient care as well as the prevention of issues from occurring. The patient's ability to remain positive in the face of his post-amputation situation is quite crucial. This is quite crucial interventions for children and adolescents will be carried out as part of this

project. Amputation has been found to have a number of physical and mental benefits, including the following anxiety was reduced, coping and adjustment skills were improved, and anti-inflammatory medicines were administered reduced discomfort and fewer hospitalizations.¹⁵⁻¹⁶

The amputation was necessary, there is a huge difference between having it done as part of cancer treatment and not. Amputations are triggered by trauma, where there is no warning of what is going to happen. The incident happened all of a sudden. Therapeutic techniques are covered as part of the intervention preparation process. The utilization of medical games or the peer modeling of previous patients are examples of such structures. The amputees are similar in appearance and can be customized to meet the specific needs of each child. A person's level of growth some proposals for educational interventions as part of a pre-intervention strategy. Preoperative counseling, film and/or peer modeling, play therapy, relaxation training, and growth are some of the options. Coping abilities that will aid in the long-term adjustment of the individual. take part in an amputation.¹⁷

Despite the fact that it is not particular to the pediatric group, research it has been demonstrated that preoperative planning for amputation lessens postoperative discomfort. It is necessary to do so in the long run, despite the difficulties that may arise. This is because to contribute to the overall success of postoperative adjustment and rehabilitation. There are a variety of methods for increasing self-resistance between being and not being. The importance of social support, as well as the necessity of increasing the self restraint of carers in this respect the next of kin is offering supportive counseling, or it may be essential to administer medications. If necessary, psychopharmaceuticals will be used. Aside from being free of discomfort and receiving home visits, anxiety is significantly increased when disease occurs on a regular basis.¹⁸

A number of factors influence the quality of life of amputees, including the following, fatigue, anxiety,

sadness, pain issues, and other symptoms have manifested themselves, among other things, after the amputation was performed. What is the magnitude of the influence of physical problems caused by amputation on one's daily life. Rosa Castillo and colleagues will conduct research in Mexico in 2020, obtain the results that individuals who have had limbs amputated have a higher quality of life lower than the required minimum score than the control group in order to facilitate psychiatric evaluation and treatment all limb amputations should be followed by a comprehensive rehabilitation program. Amputations below the knee, particularly in the case of adolescents, as well as amputations above the knee. Several studies have reported no relationship between time since amputation and depressive symptoms or psychological symptoms.¹⁹

As a result, close family members must continue to monitor in addition to the patient's physical as well as emotional health are assessed throughout the examination. When it comes to children and teenagers that want assistance, when it comes to preparing children for limb amputation, it is more difficult to do so both physically and mentally and adolescents, as well as the necessity of planning interventions to improve good and productive outcomes. During treatment, there is an improvement in long-term adjustment, including a reduction in the occurrence of the authors also discuss overcoming anxiety problems and postoperative suffering. The psychosocial consequences will continue to have an impact into adulthood. When executing an amputation, there are several stages of treatment, including pre-amputation and post-amputation.²⁰

Amputation and lifelong care are required by submitting information at the pre-amputation period, you can help save lives. Individuals can make informed judgments and set realistic expectations for themselves prior to surgery. At this point, it should also be important to examine the patient's readiness for therapy, which should be done as soon as possible. Amputation should be performed together with psychological reactions such as anxiety and

depression because if this is the case, amputation should not be performed. Interestingly, this was discovered to be a predictor of the occurrence of psychological reactions in the next 10 months. On the other hand, psychiatrists, psychologists, and surgeons are all needed to treat this problem effectively. During the post-production stage amputation, optimization of the remaining limb, pain management, and undergoing surgery are all options. Rehabilitation to regain mobility and improve daily living skills, potentially It is still necessary to complete the installation of prosthesis and instruction in their use, as well as to assess the patient's psychological state.²¹⁻²⁴ Assistance is required due to the fact that the loss of limbs will have an impact, also on the patient's body image, which will have an impact on his or her psychological state on the other hand. The role of medical rehabilitation doctors, as well as that of surgeons, psychiatrists, and other medical professionals, is critical, a psychiatrist in order to further improve the patient's overall quality of life concerning long-term care when using prostheses, it is necessary to check the health of the affected part to ensure that it is not deteriorating. Examine and assess secondary conditions such as infection, examine and evaluate amputees and intact limbs, examine and evaluate secondary conditions such as infection spinal pain as a result of overuse, the surgeon's and the rehabilitation doctor's roles medical and psychiatric professionals, as well as psychologists, are nevertheless need to keep an eye on the situation.

4. Conclusion

In the treatment of patients with limb amputations, especially in patients who are still children by remembering sufficient problems, both physical and psychological. Before and after amputation, a multidisciplinary team should be needed. involved in handling the amputation case so that a better quality of life can be achieved. more than the patient. Statement The author would like to thank the subject and his family.

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