

Short Communication

Limb Pain and Vitamin-D Insufficiency in Children

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Abstract

A number of children frequently visit in our daily practice with presenting symptom of limb pain especially at night. There might be a relationship between low level vitamin-D and limb pain in children. The children presenting with nonspecific limb pain without signs of joint inflammation and other diseases visited to the private clinic are included in this study. These children are sent to the laboratory for the assessment of vitamin-D level in their blood. Their vitamin -D level is analysed to find out the relation with the limb pain. 30 children are included in this study. Among which 63% male and 37% is female children. Majority is found between the ages of 6-10 years. Low Vitamin-D level than normal is observed in 86.6% of the children. Vitamin-D insufficiency is found in 57% and deficiency in 30% of children. Only 13% has normal vitamin-D level. Low vitamin-D level in children might be an important cause of nonspecific limb pain. Vitamin-D supplementation and sun exposure of the children is necessary for the prevention of this nonspecific complain and illness.

Introduction

Children frequently present with limb pain which is considered to be growing pain. This is found in 25% to 40% of children with no organic pathology [1,2]. This pain is located in the muscles of anterior thighs, shins, calves or back of the knees without involvement of the joints [1,3]. The physical examination reveals normal without any signs of inflammation and laboratory abnormalities [4]. The child may cry for the pain and it happens usually at evening and night [3]. Parents frequently visit to the clinics of pediatricians to seek advice for this complaints. They are worried about their children whether they are suffering from rheumatic diseases. Vitamin-D is a critical and fundamental for bone and mineral metabolism. It assumes an essential part in the homeostasis of calcium and phosphorus thus keeps up development of bone skeleton [5]. There is relation between the vitamin-D inadequacy and chronic bone pain conditions that has been discussed in adults [6,7]. I have gone through a study to assess vitamin-D level in my private clinic to those children who presented limb pain and considered as growing pain. This is done to observe the relation between the vitamin-D insufficiency and limb pain.

Patients and Method

This study selected the children between the ages of 1-15 years who presented in the private clinic with the history of limb pain. There are no signs of inflammation and joint pain. They are devoid of any other diseases. These children are selected for the study and send to the laboratory to assess the vitamin-D level in their blood. Vitamin-D level of <20 ng/dl is considered deficient, 20-29 ng/dl insufficient, and 30-100 ng/dl sufficient. There is no control group in this study.

Results

Total 30 children are included in this study. Among these 19(63%) male and 11(37%) are female children. Between the ages of 1-5 years, 6-10 years, and 11-15 years are 9(30%), 17(57%), and 4(13%) in numbers respectively. Majority of the children are between the ages of 6-10 years. Vitamin-D deficiency is found in 11(37%), insufficiency in 15(50%), and sufficient in 4(13%) children. In total low vitamin-D level than normal is found in 26(86.6%) children. In this study majority of the children has insufficient vitamin-D level. The mean vitamin-D level in deficient, insufficient, and normal group is 12.85 ng/dl, 25.15 ng/dl and 35.15 ng/dl respectively.

Discussion

The children presenting with limb pain especially at evening and night is considered as growing pain. It is explained to be due to normal growth of bone and muscles. Only assurance is the treatment in these children. Parents visit to the pediatricians with their children seeking for advice for this problem. The child cries and distressed at night. They need help for this problem. In this study male child suffers more from this problem. In another study ratio is equal in both the sexes. Age of incidence of these complains in our study is more between the ages of 6-10 years. This observation is similar to the study by Ahmad II [8]. This may be due to the active age of the children and remain protected to the home by the parents. They get less exposure to the sunlight. Urban children suffer frequently from this illness. This observation is similar to the other studies [8]. Rural children may have more opportunity than the urban to expose themselves in the sunlight. This might be the cause of vitamin-D deficiency in the urban children. Vitamin-D level is below normal level in remarkable number of children in this study. This observation is similar to the study by Ahmad II [8]. Vitamin-D insufficiency is the most important factor for the children to suffer from limb pain. Vitamin-D supplementation to these children is required to treat this illness.

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