

Prevalence of patients with Failure to thrive admitted to Maternity and Children Teaching Hospital in Al-Diwaniya.

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الخلاصة

هذه الدراسة هي نظرة عامة حول المرضى المصابين بفشل النمو دون الخامسة من العمر الراقدين في مستشفى النسائية والأطفال التعليمي في الديوانية للفترة من 1 / 7 / 2008 الى 1 / 9 / 2008 . كان العدد الكلي للمرضى دون الخامسة من العمر 420 مريضاً ، نسبة الذكور كانت 59.04% ، وكانت نسبة الإناث 40.95% . كانت نسبة المرضى الذين تقل أعمارهم عن السنة الواحدة 66.66% ، والذين أعمارهم بين السنة الواحدة والستين من العمر 20.47% ، والذين أعمارهم من 2-3 سنة (7.14%) . من 3-4 سنة (3.78%) . من 4-5 سنة (1.90%) . كانت نسبة الأطفال المصابين بفشل النمو 50.71% ، والأطفال المصابين بفشل النمو نتيجة الأسباب العضوية 48.33% ، والمصابين بفشل النمو نتيجة الأسباب غير العضوية (اجتماعي نفسي) 2.38% وكانت نسبة الأطفال غير المصابين بفشل النمو (49.28%).

Summary

This is a prevalence study of patients with failure to thrive under 5 years who were admitted in maternity and children teaching hospital in Al – Diwaniya from 1 / 7 / 2008 to 1 / 9 / 2008 .The total number of patients under 5 years was 420 patient , 59.40% was male , and 40.95% was female . The patients under 1 years of age were 66.66%, from 1 year to 2 years age was 20.47%. From 2-3y.(7.14%),from3-4y.(3.78%),from4-5y(1.90%).

The prevalence of patients with failure to thrive was 50.71% , the patients with failure to thrive due to organic causes was 48.33% , and inorganic causes (psychosocial) was 2.38% . The prevalence of patients with no FTT was 49.28%.

Key word : Failure to thrive, inorganic causes, organic causes.

Abbreviations

F.T.T.: Failure to thrive

PEM: Protein energy malnutrition

Introduction

Failure to thrive is a sign that describes a particular problem rather than a diagnosis ⁽¹⁾.

Failure to thrive (FTT) is diagnosed in an infant or child whose physical growth is significantly less than that of his or her peers ⁽²⁾.

Failure to thrive usually refers to growth below the 3rd or 5th percentile or a change in growth that has crossed two major growth percentile (from above the 75th percentile to below the 25th) in a short time. Organic FTT is marked by an underlying medical condition ; non organic or psychosocial FTT occurs in a child who is usually < 5 years old and has no known medical condition that causes poor growth ⁽²⁾ .

From 5 – 10% of premature infants and children living in poverty in developed countries may have FTT; the prevalence is much higher in developing countries with high rates of malnutrition and / or HIV infection. Family dysfunction, maternal deprivation, neonatal problems in addition to low birth weight, and maternal depression are associated with FTT ⁽²⁾.

In developed countries, psychosocial F.T.T is far more common than organic FTT. Psychosocial FTT usually occurs in the setting of poverty or poor child – parent interaction. It occasionally occurs with severe family stress, such as child or spousal abuse. Organic and non organic etiologic factors may also occur together, in children who are victims of abuse and neglect, temperamentally difficult premature infants, or HIV orphans who themselves are infected with HIV. ⁽²⁾.

Failure to thrive in the 1st year of life, regardless of cause, is particularly ominous. Maximal postnatal brain growth occurs in the 1st year of life as in the rest of child's life. Approximately 1/3 of children with psychosocial FTT is developmentally delayed and has social and emotional problems. The prognosis for children with organic FTT is more variable, depending on the specific diagnosis and severity of FTT ⁽²⁾. While the prognosis for children hospitalized for non organic F.T.T in the first 2y of life shows a high percentage of retardation (15-67%), and behavioral disturbances (28 – 48%) at 3 – 11 yr of age ⁽³⁾.

This is especially true when interactional problem and F.T.T. have been of long – standing duration ⁽⁴⁾.

In general, infants whose length & particularly head circumference are affected along with weight have a less favorable prognosis ⁽⁵⁾. Ongoing assessment and monitoring of cognitive and emotional development, with appropriate intervention, is necessary for all children with F.T.T ⁽²⁾.

Method

All admitted patients under 5 years, whatever the cause of admission, in maternity and children teaching hospital in Al – Diwaniya were included in this study from 1 / 7 / 2008 to 1 / 9 / 2008. The patients were classified according to their gender and age under 1 year of age, 1 – 2 years of age, 2-3y, 3-4y, 4-5y of age. The length or height and body weight were measured for every patient, and blotted on growth chart according to gender and age. The patient with FTT were identified according to growth chart weight for age and weight/height ratio, the patients below 3rd percentile were considered to have FTT.

The cause of FTT was identified according to the decision of pediatric specialist on the case sheet of that patient.

The patients with FTT were classified, according to the cause of FTT, in to 2 groups:

- Those with organic cause of FTT (any organic illness involving any system of the body).
- Those with inorganic cause of FTT (no organic illness was found for any system of the body).

The investigations that were done to the patients to know the organic causes of FTT included the usual available investigations in our hospital like general urine exam., ultra sound of abdomine, chest x ray, complete blood count, echo of the heart, renal and liver function tests, bone age.

Results

The total number of patients under 5 years admitted to maternity and children teaching hospital in Al – Diwaniya from 1 / 7 / 2008 to 1 / 9 / 2008 was 420 patients. The male patients were 248 represent 59.04% of the total number, the female patients were 172 represent 40.95%, as shown in figure number 1. The number of patients under 1 year of age was 280 represent 66.66% of the total number of patients admitted to the hospital. The number of patients from 1 year to 2 years of age was 86 represent 20.47% of the total number of patients admitted to the hospital. The number of patients from 2 years to 5 years of age was 54 represent 12.85% of the total number of patients admitted to the hospital as following; 2-3y was 30 patients (7.14%), 3-4y was 16 patients (3.78%), 4-5y was 8 patients (1.90%) of the total number of patients admitted to hospital, as shown in figure number 2. The number of patients with FTT was 213 represent 50.71% of the total number of the patients under 5 years admitted to the hospital as shown in figure number 3. The number of patients with organic causes of FTT of the total number of FTT (213 patients), was 203 represent 95.30%, and the number of patients with inorganic (

psychosocial) causes of FTT of the total number of FTT (213 patients) , was 10 represent 4.69% , as shown in figure number 4 .

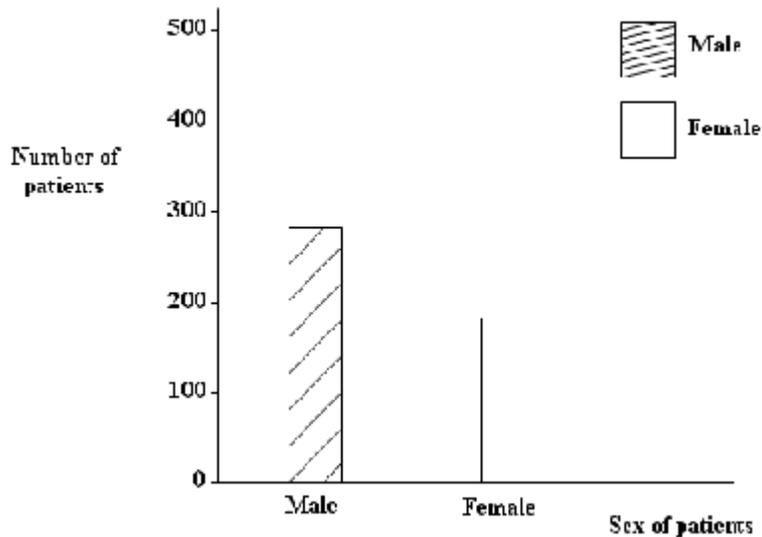


Figure no. 1: Classification of patients according to their sex

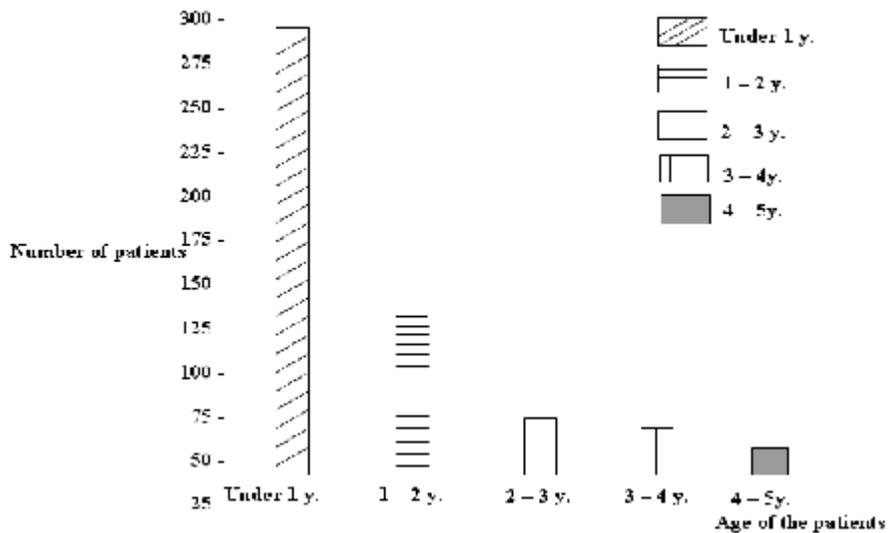


Figure no. 2: Classification of patients according to their age

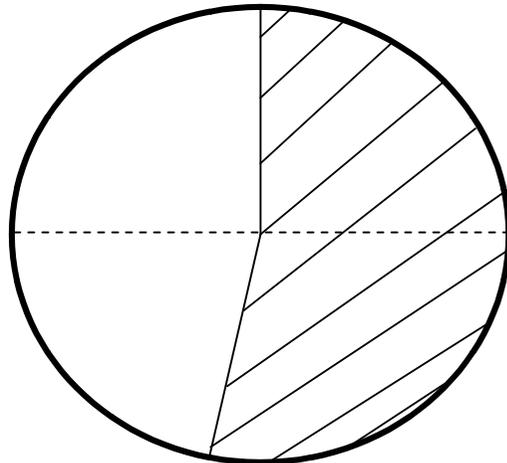
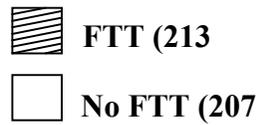


Figure no. 3: Classification of patients according to their diagnosis.

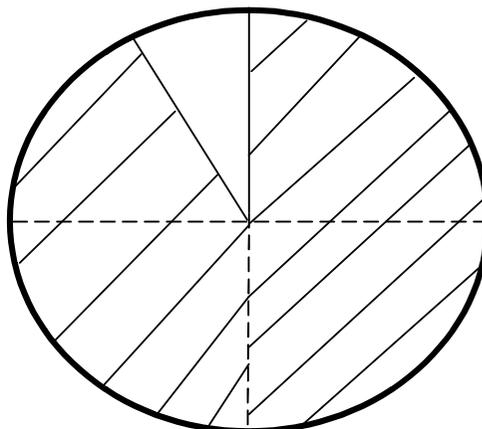
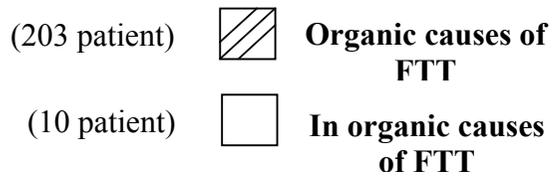


Figure no. 4: Classification of patients with FTT according to their causes

Discussion

All the admitted patients under 5 years in maternity and children teaching hospital from 1 / 7 / 2008 to 1 / 9 / 2008 were included in this study. The male patients were more than the female patients. the higher percentage of admitted patients were under 1 year of age which explain the high percentage of new deliveries in the community in our country and other developing countries where the new deliveries not only have high number in community but also more susceptible to have infections and diseases and there fore high percentage of admission to hospital. Also probably the families have low health education that can not manage these patients at home, as well as the general practitioner in the primary health centers are cautions about these patients and referring these patients to the hospital .The patients under 1y. of age was 66.66% which was higher than the other age group, as follows; 213 patients with FTT; under 1y.160 patients (75.11%),1-2y. 30 patients (14.08%), 2-3y.10 patients (4.69%), 3-4y. 10 patients (4.69%), 4-5y. 3 patients (1.40%).More than half of admitted patients were have FTT , this explain the high percentage of FTT among children admitted to the hospital. In our study , we found that number of admitted patients with FTT , are due to organic causes (95.30% of the total number of FTT 213 patients) like GIT diseases , CNS diseases , renal diseases , cardiovascular diseases , this probably that our families as well as our doctors are more concerned about organic illnesses to be treated in hospital , in addition these diseases require investigations and probably invasive measures in investigations and treatment , all that should be in the hospital .There is little number of patients with FTT due to inorganic causes admitted to the hospital (4.69% of total number of FTT admitted to the hospital) , this is probably due to 1st there is little concern , by the family as well as doctor and general practitioner , about psychosocial causes of FTT . 2nd; there is no available nutritional support in our hospital like special formula milk (pedia sure), other high protein diet or biscuits, and other type of nutritional support and this may not encourage our doctors to admit the patients with FTT to the hospital although it's very important to admit those patients to the hospital in order to change the environment of the patients , monitoring of these patients , investigations , supportive treatment , nutritional support.

In 1983 WHO estimated that 300 million children had growth retardation secondary to malnutrition. The consequences for mortality, cognitive function, social organization, and economic development are important but impossible to quantify. Preschool children in developing countries are particularly susceptible , because of their dependence on others for food , their higher protein and energy requirements , and

their enhanced susceptibility to infection , especially under non hygienic condition ; Gastro intestinal infection frequently precipitate clinical PEM because of the associated diarrhea , associated anorexia , vomiting , increase metabolic needs , and decreased intestinal absorption ; parasitic infection , play a major role in the problem in may part of the world .(6)

In one survey that focused on low income areas of United States, 22 – 35% of children 2 – 6 years were below the 15th percentile for weight, and in another survey 11% of low income children had height for age measurements below the 5th percentile. In hospitalized patients, severe as well as mild deficiencies are even more common. (6)

FTT has several causes.Approximately 70% of cases are non organic and 30% are organic. (7)

In other study showed that FTT accounts for 1 – 5% of pediatric hospital admission under 2 years of age. the population prevalence of FTT has been found to range any where between 1.3% and 20.9% depending on the definition of FTT .(8)

Conclusion and recommendation

- 1.Increase number of admission of patients with FTT to the hospital both males and females and whatever their age .
- 2.There should be available facilities in our hospital for proper diagnosis and management of patients with FTT especially those with organic causes of FTT , like CT scan,MRI, serum and urine chromatography, hemoglobin electrophoresis,radio isotop renal scanning ,serum amylase.
- 3.Encourage families and doctors for more attension to psychosocial causes of FTT and seek medical advice not only for organic causes of FTT .
- 4.Change the environment of patients with FTT due to inorganic causes by admission to the hospital , and not only patients with FTT due to organic causes admitted to hospital .
- 5.There should be nutritional support available in our hospital to improve the nutritional status of patients with FTT and thus encouraging the families to admit their children with FTT to the hospital .

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