IMPACT OF THE PRESENCE OF a CHILD WIHT MALIGNANCY ON HIS FAMILY

THESIS

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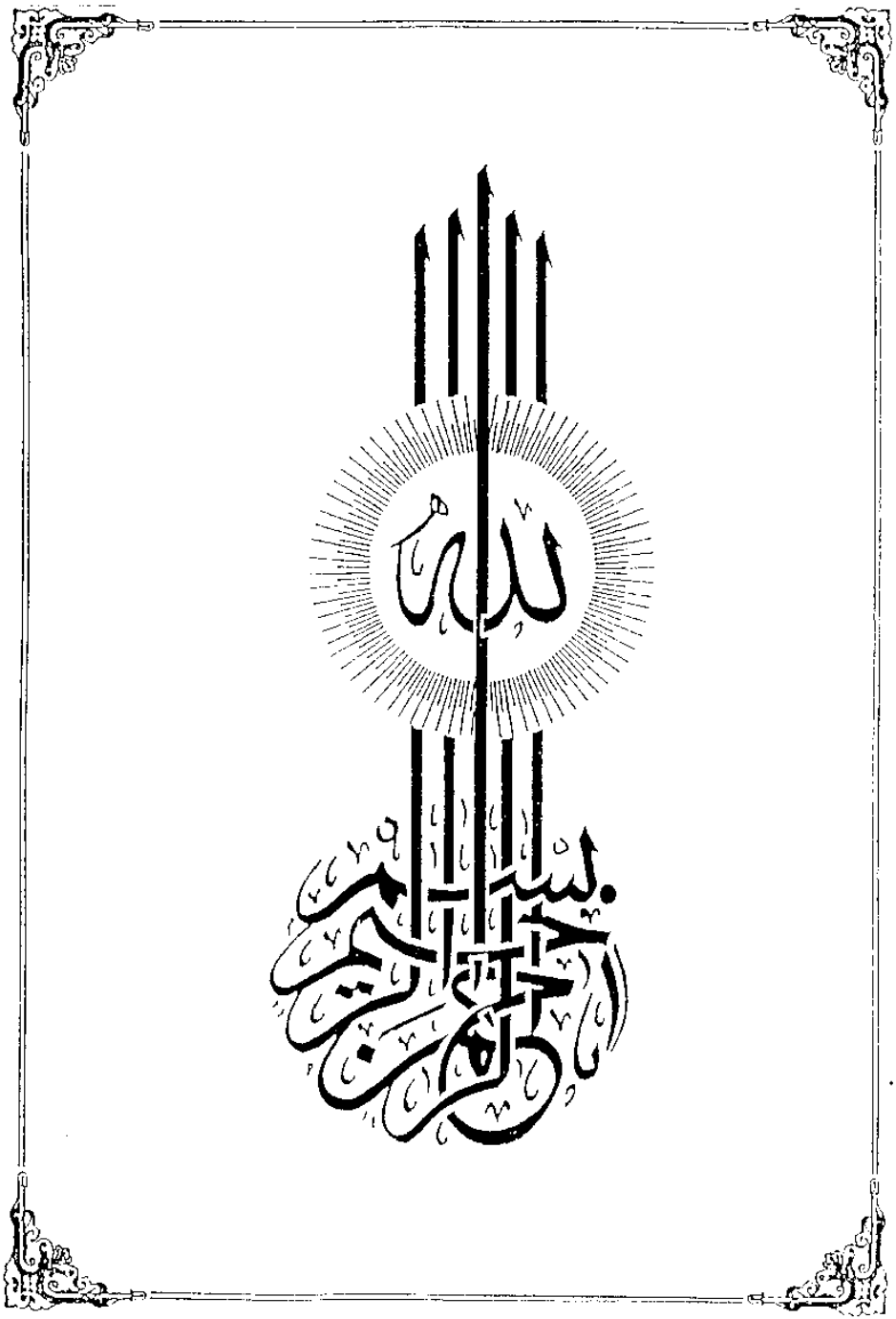

TABLE OF CONTENTS

Introduction and
AIM OF THE WORK

Study of the Psychological changes in children due to acute leukemia had been previously studied in Ain Shams University . (Bishry 1977).

However the presence of a child with malignant disease in a family exerts a different types of stress comprising. The feeling of loss of achild, the expenses of therapy , absence from school , the impression about the disease from siblings and class-mates.

The Culture of the society and beliefs might affect the different behavioural patterns of the family. It will be of interest to find out the different factors. Psychological , Social and Educational which might interact during the treatment of a member of the family in the Paediatric age group suffering from malignant disease.

The aim of the present study is :

1. To Know the impact of the presence of a child with malignancy on other family members including parents and siblings.

2. To determine the social , economic and educational stresses which occur after discovery of the disease.

3. To study the effect of culture , beliefs and educational level of parents on behaviour of the family.

REVIEW OF LITERATURE

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With the real improvement of socio-economic conditions and health care in Egypt in recent years and progress in medical care in rural and urban areas the fall in mortality from infectious diseases and other tradisional health problems decreased, and the importance of ther causes of mortality such as child hood cancer started to be prominent (Khalifa, 1982).

The percentage of deaths in childhood due to cancer has risen over the past several decades , so that at the present time cancer ranks as the second leading cause of death in children. Of the deaths due to cancer approximately one half are caused by leukemia. (Bloom, 1975).

The increased incidence in childhood mortality is a reflection of decreased mortality due to other illnesses, Particularly infections diseases , rather than an actual rise in the number of deaths due to leukemia (Fraumeni and Miller 1967).

Leukemia

The leukemias are the most common form of child hood cancer (Nelson 11th. edition) The incidence of leukemia varies between 3.86 and 8 per 100,000 as reported in dipferant countries around the world. More-over there is an age peak in the western Hemisphere between 3 and 5 years as compared to after 7 years in parts of Africa, (ZueLze rw. 1974).

The acute lymphocytic leukemias account for 76 percent of the total , with the acute non lymphocytic leukemias and chronic myelocytic leukemias accounting for the remaining 21 and 3 percent , respectively . (Borella, 1979) .

Acute leukemia is a primary malignancy of bone marrow, leading to replacement of normal bone marrow and blood elements by immature or undifferentiated blast cells and their accumulation in other tissues, (lymph nodes, liver, spleen , kidneys , brain and meninges, testes and ovaries, lungs and subcutaneous tissue) (Smith 1978).

Among 484,904 out - patients attending the children's Hospital , Ain-shams University, Cairo in the

period of 7 years from (1974 - 1981) 1/3 cases of acute feukemia were diagnosed.

Thus an incidence rate of 23.3 /100,000 was obta obtained. 87/of the cases were acute lymphocytic loukemia, 7 5 patients were males and 38 were famales, thus a male predominance was observed, .

The Male : female sex ratio in the All group was 2 : 1 and the peak incidence was found in the 3 - 5 years age group. On the other hand in the ANLL group the sex ratio was 1.88 : 1 and no special age predilication was observed. Complete remission was attained in 85 % and 75 % of cases of All and ANLL after 4 weeks of induction treatment. 12 (30 %) and 2 (10 %) of cases of ALL and ANLL survived free from relapse for 36 months. 60 % of the children were born from mothers whose ages were more than 35 years at time of conceptions . The higher the white cell count , the shorter is the relapse free survival (Khalifa et. al., 1982) Under publication

Acute Lymphocytic Leukemia (ALL)

ALL has a peak age incidence of 3 to 4 years in white children.

This ALL has a peak age incidence which has only recently become evident among non white children. ALL occurs slightly more frequently in boys than in girls (Borella, 1979) .

Clinical Features

The first symptoms are usually non specific, there may be a history of a viral respiratory infection or exanthem from which the child has not appeared fully to recover. Frequent early manifestations are anorexia, irritability and lethargy. Progressive failure of normal bone marrow function leads to pallor, bleeding and fever , which are usually the features that precipitate diagnostic studies (Mauer, 1976).

On initial examination most of the patients are pale and about one hall have petechiae or mucous membrane bleeding. Fever or lymphadenopathy is occasionally prominent and splenomegaly can be domenstrated in about $\frac{2}{3}$ of patients. Sometimes signs of increasing intracranial pressure such as headache and Vomiting may indicate leakemic meningeal involvement. Children with T cell leukemia are more likely to have significient lymphade nopathy and hepatosplenomegaly, and to have initial leukemic infiltration of the central nervous system. (Nelson 11th. edition)

Diagnosis :

The diagnosis of ALL is usually easily made on the finding of leukemic lymphoblasts in the blood smear . Sometimes anaemia with hemoglobin level less than 6 gm/dl. Mostpatients will have thrombocytopenia , though one fourth may have platelet counts greater than $100,000/mm^3$.

The defenitive study is an examination of bone marrow, which in almost all patients will be found

to be completely replaced by leukemic lymphoblasts. Achest roentgenogram may determine a mediastinal mass. Bone roentgenograms may show a ltered medullary trabeculae, cortical defects or subepiphyseal bone resorption.

Cerebrospinal fluid should be examined for leukemic cells, since early central nervous system involvement has important progrrostic implications (Mauer. 1978).

Treatment :

The treatment of ALL varies with the cell type. The basic components of treatment programs for standard ALL include an initial regimen for induction of a remission, a second phase of intensification to the central nervous system including intrathecal treatment and irradiation. A final phase of continuation or maintenance therapy. (Mauer. 78).

A. The drugs used in initial treatment includes:

- Vincristine.
- Prednisone .
- 6 M.P.
- Daunomycin .

B. Drugs used in phase of intensification are intrathecal methotrexate .

. Cranial irradiation, arabinosyl cytosine (Pinkel,s 1976).

C. Drugs used in maintenance phase

. Oral Methotrexate, mercaptoparine, cyclophosphamide anabinosyl cytosine.

Prognosis :

In general , a poor prognosis is associated with onset at an age under 2 or over 10 years, with a white blood count greater than 20 ,000 /mm^2 at the time of diagnosis, with the presence of a mediastinal mass, with early involvement of the C.N.S and with leukemia in a black patient . In all of these situations bone marrow replase is likely to occur during the period of continuation therapy (smith's 1976).

Standered ALL has the most favorable prognosis and it may be that with current therapy most affected patients can acheive long term disease free control.

ACUTE NON LYMPHOCYTIC LEUKEMIA (ANLL)

This form of leukemia accounts for about one fifth of all cases inchildren. It occurs with about the same frequency at all ages of childhood, and equally in boys and girls. This form of leukemia is that which characteristically occurs in such predisposing conditions as fanconi anaemia and Bloom syndrome, which are characterized by excessive chromosomal breakage. (Choi, 1976).

Clinical Features :

Fatigue and recurrent infections, pallor, fever, active bleeding , bone pain, gastro-intestinal distress or severe infection and very characteristic is gingival swelling due to leukemic cell infiltration. The Liver and spleen are enlarged in 60 % of patients but marked hepatosplenomegaly occurs only in 10 - 15 % . (Satow, 1977).

In 20 % there may be marked lymphadenopathy. Few patients may initially have joint pain mimicking arthritis, with a localized tumour mass (chloroma) .