CAUSES OF DEATH IN CHILDHOOD MALIGNANCIES IN EGYPT

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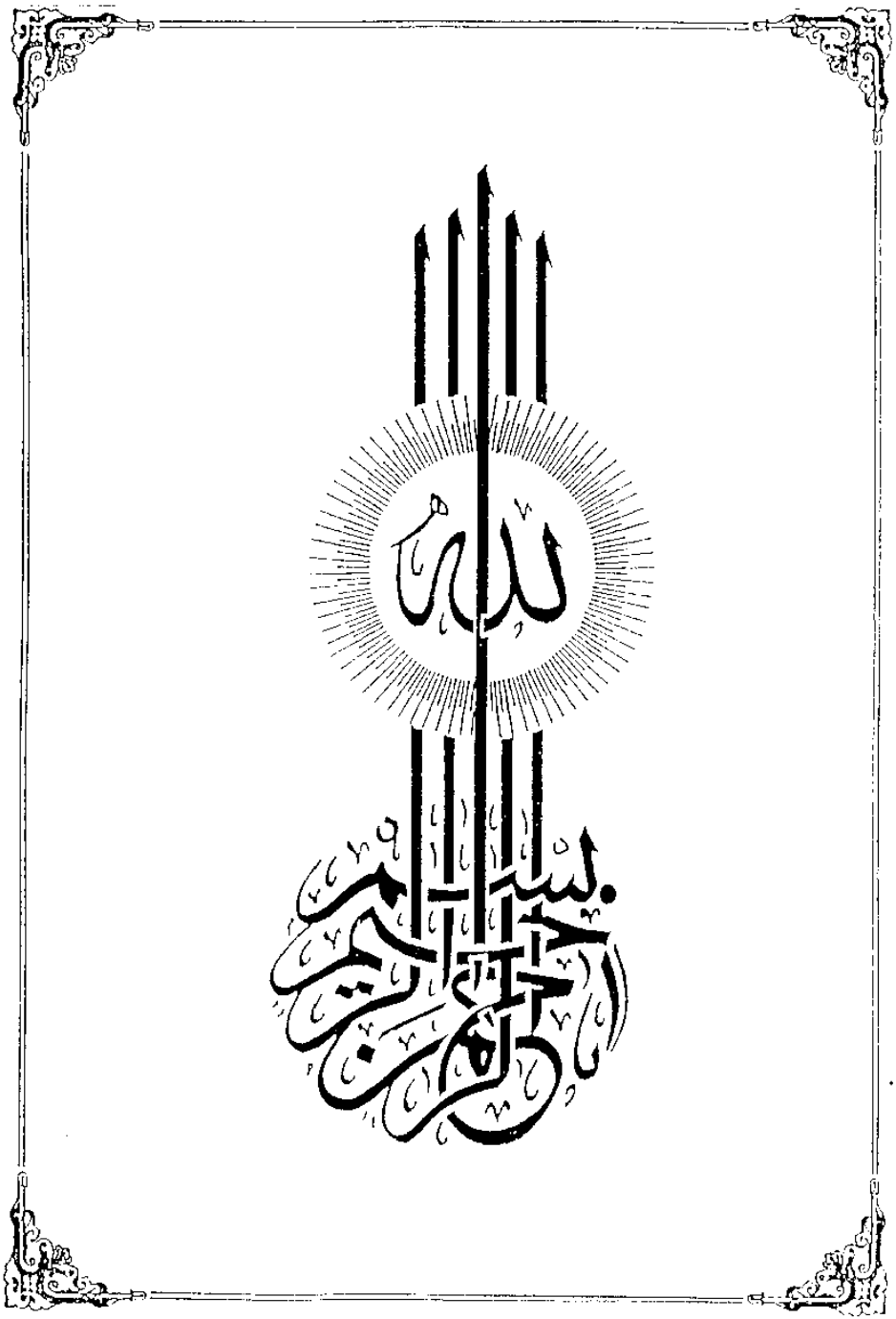

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LIST OF ABBREVIATIONS

ADP	: Adenosine diphosphate
AIDS	: Acquired immunodeficiency syndrome.
ALL	: Acute Lymphoblastic leukemia
ANLL	: Acute non lymphoblastic leukemia
BM	: Bone marrow.
CML	: Chronic myeloid leukemia
CMV	: Cytomegalovirus.
CNS	: Central nervous system
CSF	: Cerebrospinal fluid
DFS	: Disease free survival
DIC	: Disseminated intavascular coagulation
DNA	: Deoxyribonucleic acid
EBV	: Epstein Barr virus
FDP	: Fibrin degradation products.
GIT	: Gastrointestinal tract
GVHD	: Graft versus host disease.
HAV	: Hepatitis 'A' virus.
HBV	: Hepatitis 'B' virus
HCV	: Hepatitis 'C' virus
HD	: Hodgkin's disease.
HIV	: Human immunodeficiency virus
HLA	: Human lymphocyte antigen.
IgA	: Immunoglobulin A

IgG	: Immunoglobulin G
IgM	: Immunoglobulin M
ITP	: Immuno thrombocytopenic parpura
MOPP	: Methotrexate, Oncovin, Prednisone, Procarbazine.
NHL	: Non Hodgkin's lymphoma
OS	: Overall survival
PMN	: polymorphonuclear leukocyte.
PT	: Prothrombin time
PTT	: Partial thromboplastin time.
RNA	: Ribonucleic acid
RSV	: Respiratory syncitial virus.
SAS	: Statistical analysis system
SIADH	: Syndrome of Inappropriate secretion of antidiuretic hormone
TBI	: Total body irradiation.
TdT	: Terminal deoxyneucleotidyl transferase
TT	: Thrombin time

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INTRODUCTION AND AIM OF THE WORK

INTRODUCTION

Cancer is a major cause of mortality and morbidity in childhood and affects about one in 650 children by age 15 *(Birch et al, 1988)* Its incidence among pediatric age group is showing yearly increase *(Birch et al, 1988 and Khalifa et al, 1992).*

In England and Wales cancer is the 3rd cause of death in the 1-14 years age range it is exceeded by accidents and congenital anomalies *(Birch, and Marsden , 1987)* In United States it is second only to accidents *(Young et al., 1986).* In Children's Hospital Ain Shams University cancer was the 3rd cause of death in children under the age of 15 years it comes next to infections and neonatal complications *(Statistic, Dep. Ain Shams Hospital, 1992)*

Factors that contribute to death in patients with cancer remain basically unchanged namely; malignancy itself, severe infections, drug toxicity and hemorhage but their proportionate roles are changing and treatment related deaths are becoming more common *(Saarinen and Rapola, 1986)*

AIM OF THE WORK

The aim of the present work is to find out causes of death among patients with different oncological diseases attending the Hematology/Oncology Clinic Children's Hospital Ain Shams University to provide further understanding of the relapse rate and side effects of therapy.

REVIEW OF LITERATURE

Cancer is one of the most important contributors to loss of life in children younger than 15 years of age. In England and Wales malignant disease was exceeded only by accidents and congenital anomalies as a cause of death in the 1-14 year age range *(Birch and Marsden, 1987),* while in the United States it is second only to accidents *(Young et al., 1986).* In Children's Hospital Ain Shams University cancer was the 3rd cause of death in children under the age of 15 years it comes next to infections and neonatal complications *(Statistic. Dep. Ain Shams Hospital, 1992).*

Young et al., 1986 reported the mortality rates from cancer in children younger than 15 years in diffrent rigons of the world and found that Egypt ranks 46th in childhood cancer mortality. Fig. (1) *(Young et al., 1986).* Yet we do not have national cancer registry in Egypt.

The frequency of malignant diseases among the out-patient clientelles in the Children's Hospital Ain Shams University was estimated to be 132/100,000 in the 5 years period ending December 1991 *(Khalifa et al., 1992).*

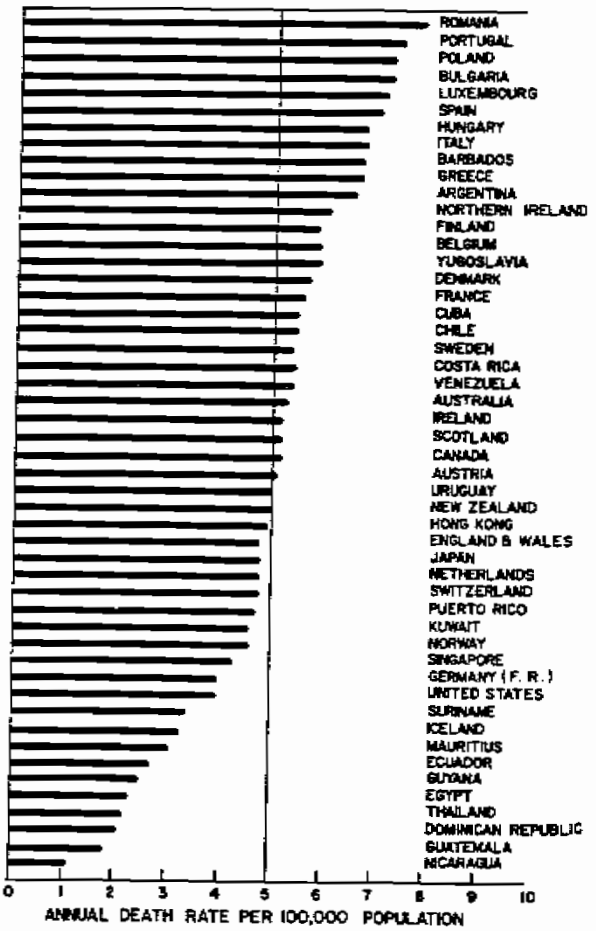

Fig. (1): Cancer death rates in children younger than age 15 years: Various countries, period approximately 1980. (Standardized on age distribution younger than 15 years of 1970 US census population. Source of data: World Health Organization). Egypt Ranks the 46th in childhood cancer mortality.

CAUSES OF DEATH IN PEDIATRIC CANCER

I. INFECTION

Infectious morbidity and death in the immuno-compromised child with cancer is well established *(Pizzo 1984 and Bodey, 1986).* The child with cancer may be immuno compromised because of the underlying malignancy or the antineoplastic therapy administered to treat the disease *(Fisher et al,1980 and Pizzo,1984).*

Some malignancies are associated with immune deficits that predispose to infection with particular pathogens; for example patients with Hodgkin's disease or non Hodgkin's lymphomas often have abnormalities of cellular immune system that highten their risk for viral and fungal infections *(Fisher, et al, 1980).*

Therapeutic modalities such as corticosteroids, cytotoxic chemotherapy and localized or wide field irradiation produce additional deficiencies of the host defense, the net consequence of these inter-related abnormalities of immune function is the immuno- compromised cancer patient *(Bodey,1986).*