

بسم الله الرحمن الرحيم



SALWA AKL



شبكة المعلومات الجامعية

التوثيق الالكتروني والميكروفيلم



SALWA AKL

جامعة عين شمس

التوثيق الإلكتروني والميكروفيلم

قسم

نقسم بالله العظيم أن المادة التي تم توثيقها وتسجيلها
علي هذه الأقراص المدمجة قد أعدت دون أية تغيرات



يجب أن

تحفظ هذه الأقراص المدمجة بعيدا عن الغبار



SALWA AKL



بعض الوثائق الأصلية تالفة



SALWA AKL



بالرسالة صفحات

لم ترد بالأصل



SALWA AKL

STUDY OF RENAL MONITORING IN CHILDREN WITH ACUTE LYMPHOBLASTIC LEUKEMIA AND NON HODGKIN LYMPHOMA BEFORE AND AFTER INDUCTION CHEMOTHERAPY

THESIS

*Submitted in Partial Fulfillment of the Requirements
of the Master Degree*

In

"PEDIATRICS"

B-17332

By

Mohamed Abd El-Aziz El-Gamasy

(M.B., B. Ch.)

Supervisors

Prof. Dr.

Shebl Said Shebl

*Prof. and Head of Pediatric Department
and Head of Hematology /Oncology unit*

Faculty of Medicine

Tanta University

Prof. Dr.

Nagi M. Abo Al-Hana

*Prof. of Pediatrics
and Head of Nephrology Unit,
Faculty of Medicine
Tanta University*

Dr.

Mohamed K. Zahra

*Assisant Prof. of Clinical Pathology
Faculty of Medicine
Tanta University*

**FACULTY OF MEDICINE
TANTA UNIVERSITY**

2003

بسم الله الرحمن الرحيم

قَالَ لَوْ شِئْتُ لَمُنَّ

أَعْلَمُ لَمَّا لَمَّا لَمَّا

أَعْلَمُ لَمَّا لَمَّا لَمَّا

صدق الله العظيم

آية ٣٣ سورة البقرة

LIST OF TABLES

	Page
Table (A) : Morphological Features of ALL.	7
Table (B) : WHO proposed classification of ALL.	9
Table (C) : Drugs that can be used in induction chemotherapy.	20
Table (D) : Age related tripple intrathecal therapy for CNS prophylaxis	20
Table (E) : Rappaport classification of NHL.	28
Table (F) : The Jude staging system for childhood NHL.	33
Table(G) : Factors associated with favourable and unfavourable prognosis of NHL.	34
Table (H) : Management of tumor lysis syndrome.	39
Table (I) : Indications of renal dialysis in tumor lysis syndrome.	39
Table (J) : Age dependent normal urinary protein excretion in children.	49
Table (1) : Clinical data of controls and patients groups.	64
Table (2) : Clinical presentations among the studied groups.	68
Table (3) : Complete blood count and ESR among studied controls and patients groups before and after therapy.	73
Table (4) : Comparison between the studed ALL and NHL groups as regard CBC before therapy.	74
Table (5) : FAB classification among the studied ALL group.	74

Table (6) : Renal function data among the controls and patients groups.	80
Table(7): Urinary findings in the controls and patients groups.	81
Table (8) : Correlation between NAG index and other renal function tests in ALL and NHL groups before and after therapy (r value).	82

LIST OF FIGURES

- Figure (1) :** The mean values of age in all studied groups .
- Figure (2) :** The mean values of weight in all studied groups.
- Figure (3):** The mean values of body surface area in all studied groups.
- Figure (4):** The mean values of body mass index in all studied groups.
- Figure (5) :** Sex distribution among studied ALL group.
- Figure (6) :** Sex distribution among studied NHL group.
- Figure (7) :** Sex distribution among studied control group .
- Figure (8):** The percentage of clinical presentations in ALL and NHL groups.
- Figure (9):** The mean values of hemoglobin % in all studied groups.
- Figure (10):** The mean values of total leucocytic count in all studied groups.
- Figure (11):** The mean values of platelet count in all studied groups.
- Figure (12):** The mean values of ESR in all studied groups.
- Figure (13) :** FAB Classification among studied ALL group.
- Figure (14):** The mean values of serum sodium in all studied groups.
- Figure (15):** The mean values of serum potassium in all studied groups.
- Figure (16):** The mean value of blood urea nitrogen in all studied groups.

Figure (17): The mean values of serum creatinine in all studied groups.

Figure (18): The mean values of creatinine clearance in all studied groups.

Figure (19) :The mean values of urine volume in all studied groups.

Figure (20): The mean values of specific gravity in all studied groups.

Figure (21): The mean values of urinary NAG index in all studied groups.

Figure (22) : Correlation between NAG index and age in ALL group.

Figure (23): Correlation between NAG index and age in NHL group.

Figure (24) : Correlation between NAG index and Hemoglobin % in ALL group before therapy.

Figure (25) : Correlation between NAG index and Hemoglobin % in NHL group before therapy.

Figure (26) : Correlation between NAG index and total leucocytic count in ALL group before therapy.

Figure (27) : Correlation between NAG index and total leucocytic count in NHL group before therapy.

LIST OF ABBREVIATIONS

ADH	: Antidiuretic hormone
ALL	: Acute lymphoblastic leukemia
ALLO BMT	: Allo bone marrow transplantation
AML	: Acute myeloid leukemia.
Ara-C	: cytosine arabinoside.
BFM	: Berlin Frankfurt Manchester
BMI	: Body mass index.
BMT	: Bone marrow transplantation.
BSA	: Body surface area.
BUN	: Blood urea nitrogen.
CALL	: Common ALL antigen.
CBC	: Complete blood count.
CD	: Cluster of differentiation.
CML	: Chronic myeloid leukemia.
CNS	: Central nervous system.
CSF	: Cerebrospinal fluid .
DFS	: Disease free survival.
EBV	: Epstein barr virus.
FAB	: French American British.
GFR	: Glomerular filtration rate.
H⁺	: Hydrogen ion
HB%	: Hemoglobin percentage.
HIV	: Human Immunodeficiency virus.
Hr	: Hour.
HSM	: Hepatosplenomegally.
HTLV	: Human T lymphotropic virus.
HUS	: Hemolytic uremic syndrome.
I.M.	: Intramuscular.
I.T.	: Intrathecal.
I.V.	: Intravenous.
K	: Potassium.
LDE	: Lactate dehydrogenase.
Mc Ab	: Monoclonal antibodies.
MLL	: Mixed lineage leukemia.
MTX	: Methotrexate.
Na	: Sodium.

NAG	:N- acetyl β .D glucosaminidase.
NAGase	: N -acetyl β .D glucosaminidase.
NCI	: National Cancer Institute.
NHL	: Non Hodgkin lymphoma.
P	: Propability.
PCR	: Polymerase chain reaction.
PCT	: Proximal convoluted tubules.
PO	: Per os.
PR	: Partial remission.
PTH	: Parathormone hormone.
RBP	: Retinol binding protein.
S D	: Standard deviation.
Sig	: Surface immunoglobulin.
SIL-2R	: Soluble interleukin 2 receptor.
SPSS	: Software Package Statistical System.
t	: translocation.
TdT	: Terminal deoxynucleotidyl Transferase.
TLC	: Total leucocytic count.
TLS	: Tumor lysis syndrome.
VCR	: Vincristine.
WBC	: White blood cells.
WHO	: World Health Organisation.
X²	: Chi square test.

introduction

INTRODUCTION

Acute leukemias represent a clonal expansion & arrest at a specific stage of normal myeloid or lymphoid hematopoiesis. Acute leukemias constitutes 97% of all childhood leukemias⁽¹⁾.

Acute lymphoblastic leukemias (ALL) is a clinically and biologically heterogeneous disease⁽²⁾.

The non Hodgkin's lymphomas (NHL) are a heterogeneous groups of neoplastic lymphoproliferative disorders which originate from B or T cell that usually originate in the lymph node but may originate in any organ of the body⁽³⁾.

Patients with acute lymphatic leukaemia or non Hodgkin lymphoma may be presented with renal failure resulting from malignant infiltration of the kidneys.

Chemotherapy resulted in clinical remission of leukaemia or lymphoma with regression of renal size and prompted improvement in renal functions but nephrotoxicity induced by cytotoxic drugs was not infrequent⁽⁴⁾.

Early institution of specific chemotherapy, maintenance of fluid and electrolyte balance and dialytic support whenever indicated may prove helpful in prevention of serious complications associated with renal failure and in halting further ischaemic injury to the kidney⁽⁴⁾.