Assessment of the Prognostic Role of Serum Angiogenin Level in Patients with Acute Myeloid Leukemia

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SUMMARY AND CONCLUSION

AML describes a heterogenous group of hematological disorders characterized by block in the terminal differentiation and unchecked proliferation of myeloid hemopoietic cell lineage. The accurate diagnosis of AML is important for appropriate treatment and management.

Angiogenesis is well known to play an essential role in the growth, dissemination and metastasis of hematological malignancies like AML. Among several angiogenic factors recognized, ANG has been identified as a specific potent positive regulator.

ANG, a 14 KDa monomeric protein, belongs to the pancreatic ribonuclease superfamily and possesses ribonucleolytic activity, which is critically involved in the induction of neovascularization by this protein.

High levels of soluble ANG have been observed in AML and they were correlated with advanced disease stage and poor prognosis.

Hence, the aim of the present study was to determine the serum level of ANG using ELISA technique, to investigate its prognostic role and its impact on patients' survival and to correlate its level with known clinical and laboratory prognostic factors in egyption AML patients.

The current study was carried out on 30 newly diagnosed AML patients and 10 age and sex matched controls. All patients were subjected to complete history taking, thorough clinical examination and laboratory investigations including:

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LIST OF ABBREVIATIONS

α	Alpha
~	Approximately
β	Beta
%	Percent
°C	Centigrade
ACP	Acid phosphatase
aFGF	Acidic fibroblast growth factor
AML	Acute myeloid leukemia
ANAE	Alpha-naphthyl acetate esterase
ANG	Angiogenin
ANLL	Acute nonlymphocytic leukemia
ADH	Anti diuretic hormone
APMF	Acute panmyelosis with myelofibrosis
APL	Acute promyelocytic leukemia
BM	Bone marrow
bFGF	Basic fibroblast growth factor
C	Cytosine
c	Cytoplasmic
CAE	Chloro-acetate esterase
CBC	Complete blood count
CBF	Core binding factor
CD	Cluster of differentiation
CEBPA	CCAAT/enhancer-binding protein alpha
CGH	Comparative genomic hybridization
CML	Chronic myeloid leukemia
CR	Complete remission
CSF	Colony stimulating factor
del	Deletion
DIC	Dissiminated intravascular coaglopathy
DNA	Deoxyribonucleic acid
DW	Distilled water
ECM	Extra cellular matrix
EDTA	Ethylene Diamine Tetracetic Acid
EGIL	European group of immunological classification of leukemia
ELISA	Enzyme-linked immunosorbent assay

EM	Electron microscope
ErK	Extracellular signal related kinase
ETO	Eight-twenty-one
FAB	French-American-British
FCM	Flowcytometry
FDP	Fibrin degradation products
FISH	Fluorescence in-situ hybridization
FLT3	FMS-like tyrosine kinase 3
FLT3-	Tyrosine kinase domain of FLT3
FN	False negative
FP	False positive
g	gram
G	Guanine
GLn	Glutamine
G1	Pre-synthetic phase of cell cycle
GVL	Graft versus leukemia
GVHD	Graft versus host disease
Hb	Hemoglobin
HLA	Human leucocyte antigene
HGF	Hematopoietic growth factors
HM	Hepatomegally
HSCT	Hematopoietic stem-cell transplantation
HS	Highly sensitive
IBD	Inflammatory bowel disease
IL	Interleukins
Inv	Inversion
IPT	Immunophenotyping
ISH	In situ hybridization
kDa	kilo Dalton
LDH	Lactate dehydrogenase
LDL	Low density lipoprotein
LN	Lymphadenopathy
MDR-1	Multidrug resistant gene
MDS	Myelodysplastic syndromes
MIC	Morphology, immunophenotyping & cytogenetics
MPD	Myeloproliferative disorders.
MPO	Myeloperoxidase
MLL	Myeloid/ lymphoid or Mixed lineage

MRC	Myelodysplasia related changes
MRD	Minimal Residual Disease
mRNA	Massenger ribonucleic acid
MYHII	Smooth muscle myosin heavy chain
NAP	Neutrophil alkaline phosphatase
NPM1	Nucleophosmin, member 1 gene
NS	Non significant
NSE	Non-specific esterase
OA	Osteoarthritis
OS	Overall survival
P	Short arm of the chromosome
P53	Protein 53 kDa
PAS	Periodic acid Schiff
PB	peripheral blood
PCR	Polymerase chain reaction
PDEGF	Platelet derived endothelial cell growth factor
PH	Pleckstrin homology
PLT	Platelet
PML	Promyelocytic leukemia
PT	Prothrombin time
RA	Rheumatoid arthritis
RAR	Retinoic acid receptor
Rb	Retinoblastoma
RNA	Ribonucleic acid
RNase	Ribonuclease
RT-PCR	Reverse transcription-polymerase chain reaction
SAPK	Stress associated protein kinase
SBB	Sudan black-B
SE	Specific esterase
t	Translocation
t-PA	Tissue plasminogen activator
TGF-β	Transforming growth factor β
TLC	Total leukocyte count
TSG	Tumer suppressor gene
VEGF	Vascular endothelial growth factor
µg	microgram

µl	microliter
UC	Ulcerative colitis
WCPP	Whole chromosome painting probe
WHO	World health organization
WT1	Wilms'tumor1

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