



A STUDY OF SERUM URICACID IN ESSENTIAL HYPERTENSION

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ABSTRACT BACKGROUND:

It Is Known That Elevation Of Uricacid Levels In Hypertensive Individuals. To Know The Relationship Between Stages Of Hypertension And The Levels Of Uricacid And The Effect Of Treatment On Uricacid Levels This Study Has Been Conducted.

AIMS:

1. To Estimate The Levels Of Uricacid In Essential Hypertension.
2. To Correlate The Levels Of Uricacid With Severity Of Hypertension In Newly Detected Hypertensives.
3. To Compare The Levels Of Uricacid In Hypertensives With That Of Non Hypertensives.

MATERIALS AND METHODS:

Age And Sex Matched Prospective Case Control Study For A Period Of Two Years.

Total Of 142 Patients 80 Were Cases And 62 Are Controls.

Their Hypertension Is Graded And The Serum Uricacid Levels Are Measured.

RESULTS AND CONCLUSION:

1. Serum Uricacid Is Significantly Elevated In Hypertensives As Compared To Normotensives.
2. Serum Uricacid Can Be Used Probably As An Early Biochemical Marker To Determine The Severity Of Hypertension.
3. The Uric Acid Levels Did Not Differ Significantly Between Hypertensives With Or Without Treatment.

KEYWORDS :**INTRODUCTION:**

Hypertension In Adults Is The Most Common Form Of Cardiovascular Diseases. The Prevalence Of Hypertension Grows Higher With Aging, Resulting In An Increase In Morbidity And Mortality Through Various Events Such As Myocardial Infarction, Heart Failure, Stroke, And Renal Failure.

Hyperuricemia Has Been Proposed To Have An Association With Hypertension In Various Studies. Serum Uric Acid (UA) Levels Were Demonstrated To Be An Independent Predictor For Developing Hypertension.

Reduction Of Serum UA Was Associated With A Decrease In BP Through The Regulation Of Renin-Angiotensin And Nitric Oxide System.

Taking This Into Account, A Hypothesis Regarding The Effect Of Serum UA-Lowering Agents Which Could Have Potential Benefits In Prevention And Treatment Of Hypertension Has Emerged.

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MATERIALS AND METHODS:

Age And Sex Matched Prospective Case Control Study.

Matching Of Other Confounding Factors Such As Diet Alcohol And Smoking Was Also Done.

The Study Was Conducted Two Years, After Obtaining Clearance From The Institutional Ethics Committee.

INCLUSION CRITERIA:

1. Age >18 Years.
2. Newly Detected Patients Of Essential Hypertension.
3. Patients With Essential Hypertension On Treatment.

EXCLUSION CRITERION:

1. Patients With Renal Failure.
2. Patients On Treatment With Drugs Altering Uric Acid Levels.
3. Lympho Proliferative Disorders.

4. Secondary Hypertension And Pregistry Induced Hypertension.

Total Of 142 Patients Were Recruited In The Study 80 Were Hypertensives And 62 Were Controls, They Were Classified According Jnc 7, And Uricacid Levels Are Measured Accordingly.

RESULTS:

A Total Of 142 Patients Were Studied During The Period Of 2 Years.

Out Of 80 Patients 58 (72%) Were Males And 22 (28%) Females.

Out Of 62 Controls 38 (61%) Were Males And 24 (39%) Females.

The Range Of Serum Uric Acid In Cases Was 1.40 To 11.30 Mg/Dl.

In Hypertensive Males It Found To Be 1.40 To 11.30 Mg/Dl.

In Hypertensive Females 2.70 To 11.10 Mg/Dl

The Range Of Serum Uric Acid In Controls Was 1.50 To 6.50 Mg/Dl.

In Males 1.50 To 6.50 Mg/Dl

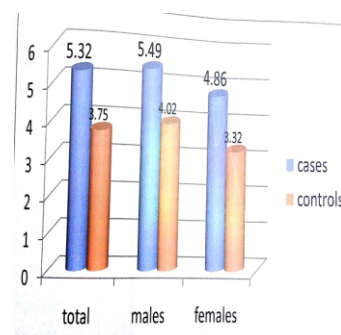
In Females 1.60 To 6.20.

The Mean Serum Uricacid In Cases Was 5.32 Mg/Dl And In Controls 3.75 Mg/Dl.

Data Analysis By T Test Done To Compare Mean Serum Uricacid Levels Was Proven To Be Significant With P Value Of <0.001.

CONCLUSION:

1. Serum Uricacid Is Significantly Elevated In Hypertensives As Compared To Normotensives.
2. Serum Uricacid Can Be Used Probably As An Early Biochemical Marker To Determine The Severity Of Hypertension.
3. The Uric Acid Levels Did Not Differ Significantly Between Hypertensives With Or Without Treatment.



Stage	Males	Females	Total
Controlled hypertension	10	4	14
Stage 1	17	9	26
Stage 2	25	6	31
Isolated systolic hypertension	6	3	9

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