

Table 1: Demographic, and clinical comparisons between patients groups

| Parameter | Allopurinol group N=97 | Control group N=97 | P value |
|--|---------------------------|-----------------------|-------------|
| Age (years) | 59.35 ± 13.18 | 59.56 ± 13.41 | 0.914 |
| Sex (Males) | 71 (73.20%) | 71 (73.20%) | 1.000 |
| Height (cm) | 165.05 ± 10.11 | 164.36 ± 8.43 | 0.609 |
| Weight (Kg) | 89.00 (71.50, 104.50) | 82.00 (69.00, 94.00) | 0.020 |
| BMI | 31.4 (28.05, 37.50) | 30.20 (25.55, 34.15) | 0.029 |
| <i>Co-morbidities</i> | | | |
| Systemic Hypertension | 83 (85.57%) | 65 (67.01%) | 0.002 |
| Pre-diabetes | 6 (6.19%) | 1 (1.03%) | 0.054 |
| Diabetes mellitus type 2 | 91 (93.81%) | 96 (98.97%) | 0.054 |
| Ischemic heart disease | 27 (27.84%) | 25 (25.77%) | 0.746 |
| Chronic heart failure | 12 (12.37%) | 7 (7.22%) | 0.227 |
| Cardiac arrhythmias /Atrial fibrillation | 8 (8.25%)/6 (6.19%) | 5 (5.15%)/3 (3.09%) | 0.389/0.306 |
| Transient ischemic attacks/ Stroke | 2 (2.06%)/7 (7.22%) | 2 (2.06%)/13 (13.40%) | 1.000/0.157 |
| Chronic kidney disease | 35 (36.08%) | 7 (7.22%) | <0.001 |
| Dyslipidemia | 57 (58.76%) | 53 (54.64%) | 0.562 |
| <i>Allopurinol indication*</i> | | | |
| Gout | 34 (35.05%) | - | - |

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|--|-------------------------|-------------------------|--------|
| Asymptomatic hyperuricemia | 57 (58.76%) | - | |
| Renal stones (multiple/recurrent) | 2 (2.06%) | - | |
| <i>Allopurinol therapy daily dose</i> | | | |
| 100 (mg/day) | 75 (77.32%) | - | |
| 200 (mg/day) | 7 (7.22%) | - | |
| 300 (mg/day) | 14 (14.43%) | - | |
| 400 (mg/day) | 1 (1.03%) | - | |
| <i>Allopurinol therapy duration (months)</i> | 39.50 (10.95, 82.78) | - | |
| <i>Diabetes related biochemistry</i> | | | |
| Glycated hemoglobin (%) | 6.90 (6.20, 7.80) | 7.30 (6.60, 8.40) | 0.010 |
| Fasting blood sugar (mg/dL)** | 122.50 (105.88, 142.00) | 131.67 (109.42, 166.50) | 0.072 |
| <i>Variability of FBS***</i> | | | |
| Standard deviation (mean) | 19.94 | 26.47 | 0.231 |
| Coefficient of variation | 14.03% | 16.61% | 0.256 |
| Variability independent of the mean (VIM) | 0.140 | 0.987 | <0.001 |
| <i>Renal biochemistry€</i> | | | |
| eGFR (ml/min/1.73m ²) | 70.07 ± 23.91 | 85.37 ± 28.52 | <0.001 |
| BUN (mg/dL) | 17.00 (13.00, 23.00) | 15.00 (11.00, 19.00) | 0.005 |
| Serum creatinine (mg/dL) | 1.12 (0.90, 1.41) | 0.93 (0.78, 1.15) | <0.001 |

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|--------------------|------------|-------------|--------|
| Uric acid (mg/dL)¥ | 6.45 ±1.78 | 5.18 ± 1.51 | <0.001 |
|--------------------|------------|-------------|--------|

Abbreviations: BMI: body mass index; FBS: fasting blood sugar; eGFR: estimated glomerular filtration rate; BUN: blood urea nitrogen

Data * was based on 93 patients; 4 patients had no mentioned indication. 2 patients from those who had gout and 3 from those labeled with asymptomatic hyperuricemia had also multiple/ recurrent renal stones.

Data ** based on 94 patients in allopurinol group, and 96 patients in control group;

Data *** based on 78 patients in allopurinol group, and 79 patients in control group;

Data€ based on 84 patients in allopurinol group; one patient did not have matching renal function tests, and 12 were on renal replacement therapy, and 97 patients in control group

Data ¥ based on 90 patients in allopurinol group, and 34 patients in control group;

Table 2: Therapeutics comparisons between patients groups

| Parameter | Allopurinol group N=97 | Control group N=97 | P value |
|--|---------------------------|--------------------------|--------------|
| <i>Diabetes mellitus medications</i> | | | |
| Insulin | 25 (25.77%) | 27 (27.94%) | 0.746 |
| Sulphonylureas | 14 (14.43%) | 20 (20.62%) | 0.257 |
| Metformin | 89 (91.75%) | 94 (96.91%) | 0.121 |
| Dipeptidyl peptidase-4 (DPP-4) inhibitors | 30 (30.93%) | 35 (36.08%) | 0.447 |
| Sodium Glucose cotransporters (SGLTs) inhibitors | 9 (9.28%) | 8 (8.25%) | 0.800 |
| <u>Glucagon-like peptide-1 (GLP-1) agonists</u> | 6 (6.19%) | 1 (1.03%) | 0.054 |
| <i>Other medications</i> | | | |
| Angiotensin Converting Enzyme Inhibitors (ACEI)/ Angiotensin Receptor Blockers (ARB) | 16 (16.49%)/ 51 (52.58%) | 24 (24.74%)/ 35 (36.08%) | 0.156/ 0.021 |
| Beta-blockers/ Calcium channel blockers | 48 (49.48%)/ 48 (49.48%) | 27 (27.84%)/ 27 (27.84%) | 0.002/ 0.002 |
| Hydrochlorothiazide/ Furosemide | | | |
| Spironolactone | 26 (26.80%)/22 (22.68%) | 15 (15.46%)/10 (10.31%) | 0.053/ 0.020 |
| Aspirin /Clopidogrel | 8 (8.25%) | 3 (3.09%) | 0.121 |

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|---------------------|-------------------------|-------------------------|-------------|
| Statins/Fenofibrate | 44 (45.36%)/8 (8.25%) | 58 (59.79%)/10 (10.31%) | 0.044/0.621 |
| Nitrates | 78 (80.41%)/10 (10.31%) | 77 (79.38%)/7 (7.22%) | 0.858/0.446 |
| Digoxin | 8 (8.25%) | 7 (7.22%) | 0.788 |
| Warfarin | 1 (1.03%) | 1 (1.03%) | 1.000 |
| | 1 (1.03%) | 2 (2.06%) | 0.561 |

Chi-squared test for association was used for the comparisons