Ranitidine and Omeprazole Effect on Serum Phosphorus in Hemodialysis Patients

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OBJECTIVES: To evaluate the effect of Ranitidine and Omeprazole in combination with CaCO3 (as a phosphate binder) versus phosphate binders alone on the serum phosphorus level (P04) in patients performing renal dialysis

METHODS: Subjects were at National Institute of Urology and Nephrology (N.I.U.N) and Ain Shams University Specialized Hospital (A.S.U.S.H). They were classified into three groups (Group A, group B, and Group C). Group A received CaCO3 alone. Group II (39 subjects) administered CaCO3 (2 gm-12 gm three times daily) with Ranitidine (150 mg twice daily). Group III (31 subjects) received the same dose of CaCO3 with Omeprazole (20 mg once daily).

RESULTS: Daily obtained data revealed that patients in group II showed marked increase in serum (P04) level at 4th, 5th, and 6th months with significant increase in Calcium-Phosphorus product (CaP). Significant decrease in serum level of Ca and Alkaline phosphatase (ALP). No significant change in serum PTH level. While in group III, the results show no significant change in serum level of Ca, P04, PTH, and (CaP) value with a significant decrease in serum level of Ca and Alkaline phosphatase (ALP).

CONCLUSIONS: Ranitidine co-administration with CaCO3 may have a beneficial role in minimizing complications in those patients.

PUL5

THE EFFECT OF PREVENTION USING DRUG THERAPY ON KIDNEY STONE RECURRENTNESS AFTER MINIMALLY INVASIVE SURGERY IN KISERNA PERMANENT SOUTHERN CALIFORNIA (KPSG)

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OBJECTIVES: Surgical intervention (extracorporeal shockwave lithotripsy (ESWL), ureteroscopic lithotripsy (URSL), or staged intervention) is necessary when the likelihood of spontaneous passage of kidney stones is low or complications arise. Secondary prevention can involve drug therapy with allopurinol, thiazides, or potassium citrate, as well as metabolic evaluation to guide drug therapy. Our objective is to evaluate the impact of drug therapy in lowering the risk of kidney stone recurrence.

METHODS: This retrospective cohort study was conducted in Kaiser Permanente Southern California. Adult patients with a diagnosis of kidney stones and who underwent surgery between July 1, 2006 and June 30, 2008 were selected. Patients were required to have at least 5 years of enrollment before the surgery (index) date without evidence of previous surgery. Patients were followed until they experienced a recurrence of kidney stones, dis-enrolled from the health plan, death, or the end of study data period. A cox proportional hazard model was utilized to estimate the effect of drug therapy on kidney stone recurrence, controlling for other risk factors and the use of metabolic evaluation.

RESULTS: A total of 2881 patients met inclusion criteria. Only 1159 (40.2%) patients received drug therapy, while 574 (19.9%) patients received metabolic evaluation within 1.5 months of the index date. ESWL was used in 46.6% of patients, URSL in 48.4% of patients, and staged intervention in 1% of patients. ESWL/URSL were used in 90% of patients. The hazard ratio (HR) for a recurrence (average follow-up: 30 months) of drug therapy significantly reduced the rate of recurrence of kidney stone (HR: 0.59, 95% CI = 0.49-0.71, p < 0.0001) relative to no drug therapy. The significant risk factors for recurrence were the use of ESWL and staged intervention. The use of use of drugs or vitamin D, hyperparathyroidism, and having history of diabetes/mal-absorption.

CONCLUSIONS: Medical prevention using drug therapy had a significant preventive effect on kidney stone recurrence following surgery.

PUL6

A SYSTEMATIC REVIEW AND META-ANALYSIS OF SOLIFENACIN SUCCINATE VERSUS TROSPUMIN CLORIDE FOR OVERACTIVE BLADDER

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OBJECTIVES: To carry out a systematic review and meta-analysis of solifenacin succinate and trospium chloride, two widely used anticholinergic drugs in the treatment of overactive bladder, in order to provide evidence on which formulary decision makers can base their recommendations.

METHODS: Electronic searches of PubMed, the Cochrane Library, other electronic search engines, as well as manual searches of relevant papers, for randomised controlled trials comparing solifenacin succinate and trospium chloride with one another, with other anticholinergic drugs, or with placebo, from 2003 to October 2011 yielded 260 titles and abstracts from which 8 papers were included in the meta-analysis. Five were trials comparing solifenacin 5mg and 10mg with placebo, while 3 were trials of trospium chloride 20mg (twice a day) immediate release (IR) or 60mg extended release (ER) versus placebo.

RESULTS: Five were trials comparing solifenacin 5mg and 10mg with placebo, while 3 were trials of trospium chloride 20mg (twice a day) immediate release (IR) or 60mg extended release (ER) versus placebo. Direct head to head clinical trials comparing solifenacin succinate with each other were found. Hence the method of adjusted indirect comparison was used to compare them. RESULTS: There was greater improvement from baseline with both solifenacin 5mg and solifenacin 10mg compared to trospium ER in daily micturitions: mean differences (md) (95% CI) = -0.89 (-1.14, -0.64) and -0.70 (-1.16, -0.25), respectively, and -0.95 (-1.39, -0.62), and -1.31 (-2.00, -0.85) when compared to trospium IR. Similarly for urinary urgency incontinence: md (95% CI) were -0.78 (-1.43, -0.42) in favour of solifenacin 5mg compared to trospium ER, -0.75 (-1.46, -0.38) in favour of solifenacin 10mg versus trospium ER, -1.55 (-2.17, -1.13) and -1.5 (-2.30, -0.98) comparing solifenacin 5mg and 10mg to trospium IR. There were no statistically significant differences in discontinuations due to adverse events including both dry mouth and constipation.

CONCLUSIONS: Solifenacin appears to be more efficacious than trospium (IR and ER) in ameliorating the symptoms associated with overactive bladder syndrome but shows no statistically significant differences in common safety and tolerability issues.