

## PDB48

## APPLICATION OF MEDICINES SCORING SYSTEM (MEDSS) : POTENTIAL SAVINGS THROUGH DRUG FORMULARY REVIEW OF SULPHONYLUREAS

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**OBJECTIVES:** Sulphonylureas available in Malaysia include glibenclamide, gliclazide, glimepiride and glipizide providing varying degree of benefits and risks. In this study we review and compare overall utility values of sulphonylureas using medicines scoring system (MedSS). **METHODS:** MedSS, a previously developed scoring framework based on multicriteria decision analysis (MCDA) that systematizes evaluation of drug attributes was used. An expert panel of 3 endocrinologists, 1 family physician and 5 pharmacists were formed. A group of medicine reviewers assisted in evidences search and reviews. Through expert panel discussions, drug attributes were identified and weighted. Based on evidences, attribute scores were allocated and added up to provide total utility score (TUS). Cost savings was calculated based on 25% reduction in utilization of drug with the lowest TUS. **RESULTS:** Attributes identified and selected for analysis were efficacy (clinical efficacy, clinical endpoints), safety (interactions, side-effects, hypoglycaemia, documentation, cardiovascular effects, combination with insulin and use in special population), patients' acceptability (formulation, dose frequency, weight change) and cost. The average weights assigned by panel members for efficacy, safety, patients acceptability and cost were 23.89%, 43.89%, 20.33%, and 11.89%, respectively. Gliclazide scored consistently high for both efficacy and safety attributes resulting in TUS of 68.5 and 67.4 for gliclazide modified release and gliclazide respectively. Safety concerns lowered the TUS for glibenclamide to 56.8. Potential direct savings on drug costs was estimated to be over RM3 million per year resulting from reduction in glibenclamide utilization from 30% to 5%. **CONCLUSIONS:** MedSS successfully organized the attributes and utilities of the drugs compared, distinguishing gliclazide as the superior alternative. Providing patients with access to drugs of higher TUS could additionally results in indirect savings beyond drug costs. Moreover, benefits of clinicians' involvement are twofold: better acceptance of any changes to the formulary list leads to improved prescribing pattern that could also positively impact drug expenditures.

## GASTROINTESTINAL DISORDERS – Clinical Outcomes Studies

## PGI1

## PHARMACOLOGICAL REGIMENS FOR ERADICATION OF HELICOBACTER PYLORI: AN OVERVIEW OF SYSTEMATIC REVIEWS AND NETWORK META-ANALYSIS

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**OBJECTIVES:** Half of the world's population is estimated to be infected with *Helicobacter pylori* (*H. pylori*), a bacterium shown to be linked with a series of gastrointestinal diseases. A growing number of systematic reviews have been published comparing the effectiveness of treatment regimens in the eradication of *H. pylori*, but have not reached a consistent conclusion. This study provides an overview of systematic reviews of pharmacological therapies for the eradication of *H. pylori*. **METHODS:** We searched major electronic databases from 2002 to 2013. Studies were considered eligible if they included RCTs comparing different pharmacological regimens for treatment of patients diagnosed as *H. pylori* infected and pooled the eradication rates in a meta-analysis. A modified version of 'A Measurement Tool to Assess Systematic Reviews' (AMSTAR) was used to assess the methodological quality. Where appropriate, network meta-analysis of proton pump inhibitors (PPI) or antibiotics within treatment regimens was conducted. **RESULTS:** 24 systematic reviews with pairwise meta-analysis were included. In triple therapy, more recently published studies tend to suggest new generation PPIs (esomeprazole and rabeprazole) achieve greater eradication rates than the older generation (omeprazole, pantoprazole and lansoprazole); furthermore, moxifloxacin and levofloxacin were both associated with greater effectiveness and lower risk of adverse events than clarithromycin. When comparing triple and bismuth based therapy, the relative effectiveness appeared to be dependent on the antibiotics within the triple therapy. A network meta-analysis based on the data from the systematic reviews was able to provide ranking of relative effectiveness of individual PPIs. **CONCLUSIONS:** Current clinical guidelines do not distinguish between individual PPIs or antibiotics. However, our analysis of the recent evidence suggests that the new generation of PPIs and use of moxifloxacin or levofloxacin in triple therapy were associated with greater effectiveness of *H. pylori* eradication.

## PGI2

## TC-325 IN THE MANAGEMENT OF UPPER AND LOWER GI BLEEDING: A TWO-YEAR EXPERIENCE AT A SINGLE INSTITUTION

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**OBJECTIVES:** TC-325 is a novel endoscopic hemostatic powder, recently adapted for gastrointestinal (GI) bleeding. However, data on its use, effectiveness, safety, and indications are very limited. To describe a single-centre experience with TC-325 use in a variety of pathologies from the upper and lower GI tract focusing on hemostasis, residency time of the powder on the lesion, and safety. **METHODS:** Retrospective chart review of all patients identified through a dedicated endoscopic database as having received TC-325 therapy between July 2011 and July 2013. Primary endpoints include initial hemostasis and early rebleeding ( $\leq 72$  hours). Data on residency time of the product, delayed rebleeding, transfusion and intensive care requirements, need for angioembolization, radiation therapy, and emergent surgery, routine second-look endoscopy and complications associated with TC-325 were also recorded. **RESULTS:** Overall there were 67 treatments using TC-325 in 60 patients. Their mean age was 68.1 years  $\pm$  13.5, with a male predominance of 65%. There were 21 treatments for non-malignant non variceal upper GI bleeding, 19 for malignant

upper GI bleeding, 11 for lower, and 16 for intra-procedural bleeding/prophylaxis therapy. Initial hemostasis was achieved in 66 cases (98.5%), with 6 cases (9.5%) of early rebleeding and 9 cases (14.3%) of delayed rebleeding. No serious adverse events were noted. Remnants of TC-325 powder were not identified even when second-look endoscopy was performed within 24 hours. **CONCLUSIONS:** To our knowledge this is the largest retrospective observational study looking at TC-325 in variety of pathologies in the upper and lower GI tract. Initial hemostasis was excellent; subsequent rebleeding rates varied according to etiology and appearance of lesions. The residency time of the powder was short-lived with complete elimination from the GI tract within 24 hours of use based on a few observations. No serious adverse events were noted.

## PGI3

## CHEWING A GUM: EFFECT ON SALIVATION, PASSING OUT OF FLATUS, BOWEL MOVEMENT AND GASTRIC MOTILITY AMONG FILIPINO ELDERLY

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**OBJECTIVES:** This study aims to determine the effectiveness of chewing a gum on salivation, passing out of flatus, bowel movement and gastric motility among Filipino elderly. **METHODS:** The study utilized a quasi-experimental design. A non-probability purposive sampling was utilized in subjects (n=20) selection with inclusion criteria being: (a) Filipino elderly aged 60 years old and above (b) able to chew (c) not taking any laxatives (d) willing to participate. Purposive sampling method was used, divided the respondents into: experimental and control group. Experimental group consisted of 10 subjects while control group 10 subjects. Study was conducted consecutively three days. Lunch was served with a 10 minutes post-lunch rest. The experimental group was given three pellets of chewing gum followed by a rest period of ten minutes-time allotted for masseter muscle to relax. Respondent's physiologic changes such as salivation, passing of flatus and bowel movement were monitored, data documented. Second phase of gum chewing performed and same process followed. **RESULTS:** Data revealed that outcome of each elderly in relation to the three physiological processes varies. Salivation yielded a p-value of 0.045 (p value <0.05), passage of flatus obtained a p-value of 0.001 (p value <0.05) and bowel movement has p-value of 0.0429 (p value <0.05), which means there is significant difference between the chewing gum and the non-chewing gum in terms of these three variables. **CONCLUSIONS:** Chewing a gum is an effective intervention in enhancing gastric motility among elderly.

## PGI4

## PREGNANCY OUTCOMES IN WOMEN WITH INFLAMMATORY BOWEL SYNDROME FOLLOWING EXPOSURE TO THIOPURINES AND ANTI-TUMOR NECROSIS FACTOR DRUGS: A META-ANALYSIS AND SYSTEMATIC REVIEW

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**OBJECTIVES:** Besides the great concern about safe choices during pregnancy in inflammatory bowel disease (IBD) patients, several current trials have indicated the harmful effect of flare-up periods in pregnant women with IBD on their newborns more than continuing maintenance therapy. Therefore, an effective medical treatment is of great importance and necessary during pregnancy. Our aim was to perform a meta-analysis on the outcomes of thiopurines use and a systematic review of anti-TNF drugs use during pregnancy in women with IBD. **METHODS:** All cohort studies in which evaluated the pregnancy outcomes of thiopurines and/or anti-TNF drugs during pregnancy in IBD women up to 2013 July were collected and analyzed. In the meta-analysis a total of 312 pregnant women with IBD that used thiopurines were compared to 1149 controls to evaluate the drug effect on different pregnancy outcomes including prematurity, low birth weight, congenital abnormalities, spontaneous abortion and neonatal adverse outcomes. **RESULTS:** Results of statistical analysis demonstrated that, congenital abnormalities were increased significantly in thiopurine exposed group in comparison to control group that did not receive any medicines for IBD treatment. The summary OR was 2.95 with 95% CI = 1.03 to 8.43 (P = 0.04). We have observed no significant differences in occurrence of other adverse pregnancy outcomes between compared groups. The results of cohorts that evaluated the safety of anti-TNF drugs during pregnancy demonstrated no increase in occurrence of adverse pregnancy outcomes in compare to controls except for the significant decrease in gestational age of newborns of drug exposed mothers in one trial. **CONCLUSIONS:** In conclusion due to the limited existing evidence, benefit-risk ratio should be considered in prescribing or continuing medicinal therapy during pregnancy.

## GASTROINTESTINAL DISORDERS – Cost Studies

## PGI5

## ECONOMIC EVALUATION OF VIRAL LOAD TEST (VLT) IN RESPONSE GUIDED TREATMENT (RGT) FOR CHRONIC HEPATITIS C (CHC)

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**OBJECTIVES:** To assess the health effectiveness, cost and cost-effectiveness of different Viral Load Test (VLT) in Response Guided Treatment of peg-interferon alpha-2a plus ribavirin for chronic hepatitis C. **METHODS:** Decision tree of COBAS test and domestic test were developed on the basis of Response Guided Treatment (RGT), and short term test efficacy, treatment response and long term outcomes of SVR or Non SVR were derived from literatures. **RESULTS:** The long term result of COBAS test plus standard treatment was 30.57LYs and 19.11QALYs, while the total cost was 70,287.91CNY. 30.34LYs and 18.89QALYs were acquired by domestic test while the total cost was 74,151.83CNY. Relatively, 0.23 QALYs (0.23LYs) were prolonged and 3,864CNY was saved per CHC patient via COBAS test compared with