RISK FACTORS FOR LOW QUALITY BOWEL PREPARATION IN HOSPITALIZED AND AMBULATORY PATIENTS UNDERGOING COLONOSCOPY, A LARGE RETROSPECTIVE STUDY

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Background/Aims: The diagnostic yield, therapeutic efficacy and safety of colonoscopy depend on adequate bowel visibility. The quality of bowel preparation in hospitalized patients is often poor. We aimed to compare the quality of bowel cleansing of inpatients compared to outpatients, to identify risk factors and to calculate the costs of inadequate preparation in inpatients.

Methods: A retrospective study of more than 11000 colonoscopies performed at Shaare Zedek Medical Center during years 2014-2015. Risk factors for poor or inadequate preparation were calculated by logistic regression.

Results: Visibility data was available for 9527 of 11184 (85.2%) colonoscopies, 9083 (95.3%) outpatients. Compared to outpatients, inpatients were more commonly male (56.4 % vs. 51.6% p < 0.001), significantly elder (66.5 (95% CI 66.79 – 69.46) vs. 57.66 (95% CI 57.36 – 57.95)) years old, p < 0.0001), and more frequently received preparation with polyethylene glycol (PEG) (66.7% vs 26.4 % p < 0.001). Visibility was qualified by the endoscopists as excellent, good/fair, poor or inadequate in 21.6 vs. 32.4%, 26.4 vs. 44.5%, 25.2 vs. 17.8% and 26.8 vs. 5.3% in inpatients vs. outpatients, respectively (p < 0.0001). After adjustment for age, gender, inpatient status, preparation and indication; age (OR 1.008 (1.004-1.012) per increment in one year) male gender (OR 1.407 (1.27-1.55)), inpatient status (OR 2.197 (1.75-2.75)) and constipation as indication (1.406 (1.064-1.859)) were identified as risk factors for poor preparation; using picosulphate preparation (OR 0.63 (0.54-0.74)) and female gender (OR 0.71 (0.64-0.78)) were protective. Using a strict pre-specified definition, we found 69 (11%) “unnecessary” procedures that were performed in inpatients; this translates into 75900-113850 NIS (20000-30000 USD), according to the Israel ministry of health price list.

Conclusions: Inadequate bowel cleansing is a common problem in hospitalized patients, leading to repeated procedures and significant costs. Inpatient status was identified as the strongest independent predictor for poor preparation.