

Reducing Drug Related Problems in the Cathlab: An Interventional Study

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Background: Drug-related problems (DRP) are major causes of morbidity and mortality. Patients undergoing coronary angiography are often treated with complex therapy and are prone to DRP. We studied the frequency and different types of DRPs in cathlab patients and examined an interventional approach to reduce DRP occurrence.

Methods and Results: Routine screening of patient files for DRP was commenced in our cathlab on 2009 by a clinical pharmacist. A total of 340 DRPs were detected in 207 patients (54.6%) of which 9.2% were considered major errors. The most common DRP was lack of a prescribed drug with unequivocal indication (37 %)., Documentation errors were present in 24.4%. Patients with DRPs were significantly older (64.7 ± 10.8 vs. 60.2 ± 10.0 y.) and treated with poly-pharmacy (6.48 ± 2.8 vs 5.8 ± 2.3 drugs/patient, $p<0.05$). Patients with DRPs suffered more from renal failure (15 vs. 5.5%), diabetes mellitus (58 vs. 26.5%) and hypertension (76 vs. 49%, all $p<0.05$). DRP occurrence decreased significantly during the monitoring period (53.7% vs 46.3%, $p<0.05$). To further reduce DRP occurrence we changed the format of the cathlab post-procedural orders and included common drugs checklist. Following the introduction of the new format we observed a significant reduction in DRPs. Lack of GI protection was decreased from 23.7 to 9.4%, missed prescription was reduced from 5% to none for aspirin, 11.8 to 5.6% for statins and 6.7 to 3.7% for ACE inhibitors.

Conclusions: DRPs are common in the cathlab. Risk factors for DRP are poly-pharmacy and advanced age. Screening for DRPs is simple, and with prompt intervention may be valuable in reducing drug-related morbidity and mortality.