CHARACTERIZATION OF PSYCHOTROPIC DRUG USE SURROUNDING PHYSICAL RESTRAINT APPLICATION IN MECHANICALLY VENTILATED, CRITICALLY ILL ADULTS.

Guenette, Melanie1; Farquharson, Tara1; Cho, Ara1; Wheeler, Kathleen1; Cheung, Alexandra1; Traille, Marlene2; Mantas, Ioanna1; Mehta, Sangeeta3; Rose, Louise4; Burry, Lisa1
1Pharmacy, Mount Sinai Hospital, Toronto, Canada; 2Nursing, Mount Sinai Hospital, Toronto, Canada; 3Medicine, Mount Sinai Hospital, Toronto, Canada; 4Lawrence S. Bloomberg Faculty of Nursing, University of Toronto, Toronto, Canada

Introduction: Chemical restraint with psychotropic medications (e.g. benzodiazepines, non-benzodiazepine sedatives i.e., propofol and ketamine, opioids, and antipsychotics) is preferred over physical restraint (PR) for the management of agitation and for prevention of interference with medical devices. However, limited data exist describing the use of such drugs preceding and during PR application for critically ill adults.

Objectives: To characterize psychotropic drug use (i.e., alterations to drug regimens) both preceding and during PR application in critically ill, mechanically ventilated adults.

Methods: Prospective single centre observational study of all patients physically restrained during invasive mechanical ventilation. Drug data were collected for three time intervals: 1) baseline, 120 to 61 minutes prior to PR application, 2) pre-PR, 60 to 0 minutes preceding PR application, and 3) post-PR, up to six hours after PR application. Types of psychotropic drug interventions (e.g. initiation, increase, decrease, and/or cessation) were recorded, as were the total time of PR use and Intensive Care Delirium Screening Checklist (ICDSC) scores.

Results: Fifty-nine patients met inclusion criteria (31 male, 28 female), with a mean age of 59.5 (SD = 18.7) years. Twenty-nine percent of patients screened positive for delirium, either during the nursing shift in which PR was applied, and/or the shift immediately following PR application. All patients were restrained using two-point Posey soft restraints, for a mean duration of 42.2 (SD = 51.3) hours. During the pre-PR period, 16 (27%) patients received no psychotropic drugs, 11 (19%) had no changes to their existing drug regimen, and 32 (54%) had a drug intervention. Twenty-seven (46%) patients had at least one drug initiated and/or increased in dosage during the pre-PR period, representing 41 prescriptions: 11 (27%) opioids, 15 (37%) benzodiazepines, two (5%) antipsychotics, and 13 (32%) non-benzodiazepine sedatives. During the post-PR period, five (8%) patients continued to receive no psychotropic drugs, four (7%) had no changes to their existing regimen, and 50 (85%) had a drug intervention. Forty-two (71%) patients had at least one drug initiated and/or increased in dosage during the post-PR period, representing 71 prescriptions: 29 (41%) opioids, 19 (27%) benzodiazepines, seven (10%) antipsychotics, and 16 (23%) non-benzodiazepine sedatives.

Conclusion: These data suggest that most patients receive psychotropic drugs immediately prior to, or early in the application of PR. Most interventions were new drug initiations, and/or increases in existing regimens, suggesting efforts are made to improve chemical restraint.

References: N/A