We recommend the use of our proposed format for recording Perioperative TOE and more multi-centre surveys to be conducted in order to achieving uniform recording process.

Oral Abstract Presentations 802
Thursday, June 25, 2015
3:00 pm–3:30 pm, Room F2/F3

OP-107

Readmission costs related to cardiac surgery. Analysis of risk factors and costs within six months after discharge using an administrative registry

Andrea Rossi Zadra[1], Enza Caruso[2]

[1]AO Citta della Salute e della Scienza di Torino, Italy, [2]Università di Perugia and Capp, Modena, Italy

Background. Overall expenditure for cardiac surgery patients with high preoperative risk is increased because of high rate of readmission. The need of prolonged stay in intensive care units is a determinant of organ failure. We analyzed the impact of patient characteristics on readmission risk and on global costs of reimbursement from the National health service.

Methods. We analyzed demographic data, diagnosis and procedures listed according to ICD-9CM definitions of the administrative registry of Regione Piemonte, and selected 2067 patients who received cardiac surgery in 2009. Readmission history related to postoperative complications was followed for six months after discharge. We identified the ICD-9CM codes for perioperative morbidities and procedures that are known risk factors for increased hospital and ICU length of stay and included rehabilitation. Hazard models were used to identify predictors of readmission. The impact on the total expenditure for each patient was evaluated with regression analysis.

Results. 528 out of 2067 (25,54%) patients had in total 877 readmissions, and 1547 underwent rehabilitation. Length of stay, tracheostomy, heart failure and the use of IABP or ECMO are both strong risk factors for readmission and increase of costs. Tracheostomy alone accounted for an increase of 24367 euros. Perioperative respiratory or renal failure, infection or peripheral arterial disease predicted increased risk of readmission but not additional costs.

Discussion. Our results are similar to outcome described in literature. The ICD-9CM coding system for administrative purposes might be a reliable indicator for the actual clinical risk and predict an increase of expenditure.

REFERENCE

1. 30-day readmissions after coronary artery bypass graft surgery in New York State. Hannan EL et al. JACC Cardiovasc Interv. 2011 May;4(5):569-76

OP-108

Perioperative glucose control during on-pump elective coronary artery bypass graft in type 2 diabetes mellitus patients

L. Kuznetsova

Russian National Centre of Surgery named after B.V.Petrovsky

Background & Aim. An appropriate perioperative glucose control in type 2 diabetes mellitus (DM) patients is a great challenge. In addition to concomitant metabolic disturbances, hyperglycaemia is caused by peri-operative stress, cardiopulmonary bypass (CPB), the use of glucose-containing solutions, inotropes and steroids. Maintenance of an appropriate blood glucose (BG) level has been associated with better outcomes, including lower mortality. The aim was to compare the efficacy and safety of 2 methods of insulin therapy (computerized predictive algorithm (CPA) and "empirical therapy" (iv. bolus or infusion).

Methods. 90 patients with type 2DM, undergoing elective on-pump CABG.Group 1 (empirical therapy) insulin was given as a bolus or infusion. Group 2 ("SGC"), insulin was given using dynamic CAP (Space Glucose Control), BBraun, Germany). Glucose levels were measured in arterial blood with ABL - 800 Flex" ("Radiometer, Denmark) at the following points: operation start (I); heparin (II); start, middle, end of CPB (III, IV, V); protamine (VI), surgery end (VII). Hyperglycemia was considered as BG level over 10 mmol/l, severe hyperglycemia () – over 12 mmol/L; hypoglycaemia is less than 4.4 mmol/L.

Results. the incidence of hyper- and hypoglycemia (%of patients) are presented in table 1.

STAGES	I	II	III	IV	V	VI	VII	HYPO-cases	TOTAL insulin (ED)
Group I	23	45	67	75	72	87	80	1	12±3
Group II	20	40	20*	30*	40*	20*	20*	0	18±3*

*$p<0.05$. Statistical analysis was performed with SPSS 17.0 for Windows.

Conclusion. Insulin therapy, based on CPA provides better glucose control in type 2 DM patients than empirical therapy. Despite higher doses of insulin, due to doses calculation for a particular patient, there were no hypo- episodes, which makes this therapy safer.

OP-109

The sedative effect of remimazolam in general anesthesia for cardiac surgery measured by Narcotrend

Carmine Bevilacqua[1], Stefan Probst[1], Mariola Soehngen[2], Jörg Ender[1]

[1]Department of Anesthesiology, Heart Center Leipzig, Germany, [2]PAION Deutschland GmbH

Background & Aim. Cardiac surgery is burdened with an increased intra-operative awareness of up to 2%. In conjunction with the fast-track concept, i.e., fast weaning and extubation at the end of the surgical procedure, quick off-set of the sedation is of growing importance and thus becomes another main target for each sedative that is employed in general anesthesia.

Methods. We conducted a prospective, randomized, single blind, clinical Phase 2 study testing the new, short-acting benzodiazepine remimazolam against a standard regimen of propofol and sevoflurane. For general anesthesia allowing cardiac surgery, either remimazolam or the combination of propofol and sevoflurane were administered together with fentanyl for induction and remifentanil for maintenance. Success was defined as no need for rescue sedative. Depth of sedation was measured with the Narcotrend® monitor. A Narcotrend index between 30 and 50 was regarded as ideal, but strict adherence was not mandatory. An independent, blinded observer assessed post hoc whether the administration of the rescue sedative medication was justified based on the Narcotrend index.