Abstracts
13th AACA
Fukuoka, Japan
June 1-5, 2010

hosted by
under the auspices of AARS of WFSA

Safety and Challenge
many clinicians have proved the clinical advantage. Prophylactic CSFD before TAA surgery is also reported as a reasonable treatment. We have performed these prophylactic CSFDs more than 60 cases in a year and have proved the clinical effectiveness. Thus, we applied CSFD to the following conservative case.

<Case report>
A 69-year-old hypertensive man was admitted to our emergency department with severe back pain and a catastrophic attack of the lower extremities. Computed tomography (CT) demonstrated an aortic dissection of the descending aorta with thrombosed false lumen. He had paraplegia, Manual Muscle Test (MMT) 1, and dissociated sensory loss on the lower extremities. He immediately underwent CSFD in our operating room, and the CSF pressure was maintained at 10 cm H2O. The puncture site was L4-L5, and no major complications occurred. No administration of naloxone was performed, and his systolic blood pressure was maintained strictly between 120-140 mmHg. Three hours later, the muscle strength in his leg slightly improved, and he regained leg's movements 6 hours after. On the following day, the dysfunctions in the lower extremities progressively improved (MMT4), and the CSFD tube was removed.

<Discussion>
Effective treatments for spinal ischemia due to acute type B aortic dissection have not been established yet. We employed CSFD, frequently used for postoperative or preoperative phase, on a conservative treatment of paraplegia and could show a clinical effectiveness. Some reports, on the other hand, indicated the spontaneous recovery from paraplegia due to aortic dissection. However, by consideration of the timing of recovery in our patient, there can be no doubt that this CSFD treatment strongly associated with accelerating the recovery from spinal shock. We believe that CSFD can be considered a useful treatment option in conservative patients having neurologic deficits as a result of type B dissection of the distal thoracic aorta.

AP29-3
The efficacy of conservative transfusion strategies of blood and blood products in postoperative cardiac surgical care
Masamitsu Sanui / Koichi Matsuo / Junji Shiotuka / Haruhiko Ishioka / Takahiro Shimozono
Saitama Medical Center, Jichi Medical University, Japan

Background:
In April 2007, high-intensity (closed) postoperative care managed by critical care anesthesiologist was instituted into our adult cardiac surgical intensive care unit (ICU), previously low-intensity (open) unit mainly managed by surgeon. In the new closed ICU, evidence-based standard of care including conservative transfusion strategies of blood and blood products was implemented. The purpose of this study was to review the quality of evidence-based, closed-type postoperative intensive care compared to that given by the previous open setting.

Methods:
We included 975 adult cardiac surgical patients in our institution between January 2006 and September 2008. As a control, 470 patients in the open ICU before April 2007 were included. After 1 month of transitional period, from May 2007, 505 patients were assigned as the closed ICU patients. In the closed ICU, hemoglobin concentrations were maintained at 7.0 to 9.0 g/dl, neither albumin nor fresh frozen plasma (FFP) was administered for the initial intravascular fluid resuscitation, and other products were given when strictly indicated. The chart review was conducted to compare the patient baseline characteristics, the amount of transfused packed red blood cells (PRBCs), FFP, platelet concentrate (PC), albumin, and other blood products. The patient outcome parameters in both units were also addressed.

Results:
Baseline characteristics were similar in both groups. The conservative strategies reduced the amount of FFP transfused (1423 units for 18% patients in the open ICU vs. 626 units for 15% patients in the closed ICU, p<0.05), and that of albumin (676 vials for 35% vs. 43 vials for 4%, p<0.01). The transfusion amount of PRBCs, PC, gamma globulin, haptoglobin, and antithrombin III were all similar in both ICUs. The outcome parameters including hours on mechanical ventilation (median 4.4 vs. 4.5 hours), ICU stay (median 4 days in both ICUs), hospital stay (median 22 days in both ICUs), and 30 days mortality (2.7% vs. 1.6%) were also similar.

Conclusions:
The conservative strategies in anesthesiologist-driven, closed cardiac surgical ICU reduced the transfusion amount of plasma and albumin with no apparent adverse outcomes. Further evaluation of other outcome measures including postoperative antibiotics use and infectious complications will be discussed in the session.

AP29-4
A case of amlodipine overdose
Tan Ann Joe1 / Wong Kang Kwong2 / Gracie Ong Siok Yan2
International Medical University, Clinical School Seremban, Malaysia1, University of Malaya, Malaysia2

Introduction
Amlodipine, from the dihydropyridine group of calcium-channel blocker, is a commonly prescribed anti-hypertensive. Its characteristics include once a day dosing, long duration of action and relatively lack of side-effects. However, in overdosage, this will also lead to prolonged duration of toxicity. We describe a case of severe toxicity associated with overdose of amlodipine.

Case report
A 21 years old lady presented to the emergency department, complaining of bilateral lower limbs numbness and palpitations, 3 hours after deliberately ingesting 60 tablets of amlodipine 10 mg. Her blood pressure was low on and she was fluid resuscitated. Dopamine, followed by noradrenaline was started when her blood pressure continued to deteriorate. Gastric lavage was performed and activated charcoal was administered. Her blood gas analysis revealed metabolic acidosis with a base excess of -18.8 mmol/l. Her electrocardiogram demonstrated sinus tachycardia, with deep ST depression in leads II, III, aVF and V4-V6. She was given intravenous calcium gluconate for a low ionized calcium of 0.42 mmol/l. 12 hours after admission, she became more acidic and tachypnoeic. She was subsequently intubated and ventilated and was then transferred to the intensive care unit. During the first 2 days in the ICU, her inotropic requirements increased and IV glucagon 5 mg bolus followed by 10 mg/h was started. The metabolic acidosis gradually improved and inotropic infusion decreased after 3 days in the ICU and ceased after 5 days. She was extubated at day 7 and discharged the next day after psychiatric review.
Discussion
Dihydropyridines act selectively at arteriolar beds with little effect on cardiac pacemaker cells.
However, in severe toxicity, some of this pharmacological selectivity may be lost. The reported lowest ingested dose in five fatal adult cases was 70 mg. There were two cases of survival following 1000 mg ingestion. Notable serious complications include non-cardiogenic pulmonary oedema which may be secondary to oedematous fluid resuscitation and renal failure, secondary to the severe refractory hypotension. In conclusion, amiodipine overdose can be treated successfully with early GI decontamination, resuscitation with calcium and glucagon infusion and judicious use of inotropes and intravenous fluids.

**AP29-5**
Three cases of severe bradycardia associated with hyperbilirubinemia
Masamitsu Shirokawa / Yohko Nagasumra / Susumu Oomi / Kenichiro Habuka / Fumio Sakai / Yoshihiko Watanabe
Tokyo Metropolitan Hiroo General Hospital, Japan

[Introduction] Hyperbilirubinemia is known to occur following massive transfusion for trauma and during intensive treatment for sepsis. In particular, posttraumatic hyperbilirubinemia is thought to require no therapeutic intervention. Herein we report our experience with three cases of hyperbilirubinemia presenting with frequent onset of severe bradycardia.

[Case report] Case 1: A 76-year-old man who developed sepsis secondary to occultation of the superior mesenteric artery. Total bilirubin increased to 15.9 mg/dl, and from day 28 severe bradycardia with paroxysmal sinus arrest and sinus bradycardia was observed. Bilirubin did not return to normal, and the patient died on day 45 of multiple organ failure. Case 2: A 57-year-old man who developed sepsis due to wound infection following massive transfusion performed for compound fracture of the pelvis, perforation of the small intestine, and left humerus fracture. Total bilirubin increased to 32.4 mg/dl. Similar bradycardia was observed from day 17, and although it resolved after total bilirubin improved to ≤3.4 mg/dl, the patient died on day 43 of multiple organ failure. Case 3: A 72-year-old woman who received massive transfusion for pelvic fracture, bilateral compound fracture of the lower leg, and bilateral hemopneumothorax. Total bilirubin increased to 30.7 mg/dl. Similar bradycardia was observed from day 28, but resolved after total bilirubin improved to ≤7.9 mg/dl. The patient has recovered and is presently capable of walking without assistance. [Discussion] Bradycardia spells occurred after bilirubin levels reached the peak, and improved as bilirubin levels decreased. Bradycardia has been reported to complicate jaundice, suggesting that bile acid causes hypertonicity of the vagus nerve and atropine was in fact effective. It was thought that bradycardia spells were induced only when the patient was exposed to a certain threshold level of bilirubin for a given period of time. Although it has been reported that no therapeutic intervention is necessary for posttraumatic jaundice, monitoring of arrhythmia was considered necessary for patients with prolonged elevated bilirubin levels, as was bilirubin removal for cases of complication by bradycardia spells. Further investigation is necessary to determine the threshold for onset of bradycardia.

**AP29-6**
To inform, or not to inform - informed consent induced takotsubo cardiomyopathy: a case report
Tomoko Hino / Yuka Yoshida / Hideki Nakatsuka / Yoshihisa Fujita
Department of Anesthesiology and Intensive Care Medicine 1, Kawasaki Medical School Hospital, Japan, Department of Anesthesiology and Intensive Care Medicine 2, Kawasaki Medical School Hospital, Japan

Introduction
We report a case of takotsubo cardiomyopathy in a 68-year-old female likely to be induced by informed consent about the patient's husband's critical condition.

Case description
A 68-year-old Japanese female was in an informed consent room after an emergency operation of her husband performed for his ruptured abdominal aortic aneurysm. By anesthesiologist and surgeons, she was informed that her husband had undergone emergency operation, but still in critical condition in the ICU. Then she suddenly complained acute chest discomfort accompanied by severe back pain.
She was transferred into the recovery room, and examined by cardiologists immediately. Vital signs were: blood pressure of 200/60 mmHg, pulse 90/min, SpO2 of 93% on 31/min O2. ECG showed NSR with ST elevation in leads 1, AVL, V2-V6. Echocardiogram revealed severe hypokinesis of the apical and middle segments with preserved contraction of the basal segments. Emergent catheterization revealed normal coronary arteries. The diagnosis of takotsubo cardiomyopathy was made and the patient was taken to the ICU and monitored overnight. Her general condition, laboratory results, and LV wall motion recovered in seven days with only oxygen administration, and she was discharged on day 10 after the onset.

Discussion
Takotsubo cardiomyopathy is an acute, reversible heart failure triggered by emotional or physical stress. In the present case, because of the chronology of events, it is most likely that being informed about her husband's severe status caused overwhelming stress to develop this condition.

Declaration of Lisbon adopted in 1981 state as follows: "...The patient has the right to the information necessary to make his/her decision. If the patient is unconscious or otherwise unable to express his/her will, informed consent must be obtained whenever possible, from a legally entitled representative where legally relevant."
Anesthesiologists in clinical settings follow these statements. However, in some situations, not to inform some part might benefit patients better.

**AP29-7**
A case report of large lung abscess of pseudomonas aeruginosa treated with drainage and antibiotics without resection formed after ingestion of sulfuric acid
Tsukasa Kondo / Naoki Matsumiya / Toshihiro Naganuma
Department of Anesthesiology and Critical Care Medicine, Tsuchiura Kyodo General Hospital, Japan

A 40-year-old man was transferred by ambulance because of taking sulfuric acid for suicide. He was healthy and took no