

Trends In The Use Of Vasopressors In Cardiac Surgery Intensive Care Unit

N. Srivali¹, C. Thongprayoon², W. Cheungpasitporn¹, K. B. Kashani¹

¹Mayo Clinic, Rochester, MN, ²Mayo Clinic, rochester, MN

Introduction: The use of vasopressor was common in cardiac surgery intensive care unit (CSICU). Due to the lack of conclusive evidence in superiority in efficacy among various types of vasopressors, the choice of vasopressor use mainly depends on the physician preference. This study aims to describe the prevalence of vasopressor use and the trend in the use of each vasopressor medication in CSICU over the past 7 years.

Method: This is a descriptive study conducted at a tertiary referral hospital. All CSICU admissions at our institution between January 2007 and December 2013 were included in this study. The use of vasopressor within given ICU day (12.00 am – 11.59 pm) during CSICU stay was reviewed. Vasopressors were defined as the continuous intravenous administration of norepinephrine, epinephrine, dopamine, phenylephrine, or vasopressin regardless of duration and dosage. The use of each vasopressor was reported as the vasopressor utilization index (VUI), using the following formula Vasopressor utilization index (VUI) =

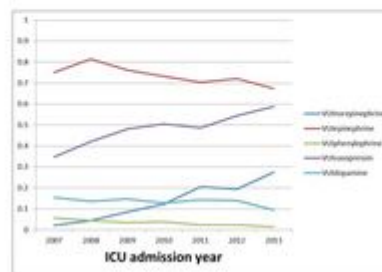
(The total number of ICU days on a given vasopressor)/ (The total number of ICU days on any vasopressor)

Result: Out of 29,557 ICU days with vasopressor use, epinephrine was used for 21,689 (73%), vasopressin for 14,443 (49%), norepinephrine for 4,254 (14%), dopamine for 3,960 (13%), and phenylephrine for 966 (3%). From 2007 through 2013, there was an increasing trend in the use of vasopressin (VUIvasopressin was 0.35 in 2007 and 0.59 in 2013) and norepinephrine (VUInorepinephrine was 0.02 in 2007 and 0.27 in 2013). There was a slight decreasing trend in the use of epinephrine (VUIepinephrine was 0.81 in 2008 and 0.67 in 1013), phenylephrine (VUIphenylephrine was 0.06 in year 2007 and 0.02 in year 2013), and dopamine (VUIDopamine was 0.16 in 2007 and 0.10 in 2013)

Conclusion: Epinephrine is the most commonly used vasopressor in CSICU. The use of norepinephrine and

A) Cardiac surgery ICU

Vasopressor	All	ICU admission year						
		2007	2008	2009	2010	2011	2012	2013
VUIepinephrine	0.94	0.87	0.84	0.89	0.87	0.81	0.79	0.77
VUInorepinephrine	0.02	0.05	0.11	0.16	0.25	0.30	0.32	0.27
VUIvasopressin	0.35	0.36	0.54	0.53	0.54	0.57	0.52	0.52
VUIDopamine	0.29	0.35	0.42	0.48	0.51	0.49	0.54	0.53
VUIphenylephrine	0.13	0.16	0.14	0.15	0.13	0.14	0.14	0.13
VUIphenylephrine	0.06	0.09	0.11	0.07	0.06	0.06	0.06	0.04



Vasopressin are in upward trajectory.

This abstract is funded by: None

Am J Respir Crit Care Med 193;2016:A7066

Internet address: www.atsjournals.org

Online Abstracts Issue

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