

Predictors of Angiographic Hemostasis in Life-Threatening Oronasal Hemorrhage Following Facial trauma

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Introduction: Severe oronasal bleeding after facial trauma is uncommon, with incidence reported as 1%, and yet could be life-threatening.^{1,2} Previous studies have been focused on prognostic factors among severe traumatic oronasal hemorrhage. This study aims to identify predictors of angiographic hemostasis in patients suffered from life-threatening traumatic oronasal hemorrhage.

Materials and Methods: We retrospectively reviewed patients who experienced craniofacial trauma with life-threatening oronasal hemorrhage in our institute from January 2009 to December 2014. Patients who experienced posttraumatic oronasal hemorrhage and presented with hemodynamic instability, defined as tachycardia, hypotension, or required intubation to secure airway were enrolled.^{3,4} Patients who underwent angiography without embolization and patients who did not undergo conventional management before transarterial embolization (TAE) were excluded. Patients achieved hemostasis with TAE were compared with those achieved hemostasis by conventional management. Characteristics, risk factors, mortality and morbidities, including intensive care over 10 days, neurological deficit, secondary intervention, respiratory failure, or severe infection, were collected and analyzed systemically.

Results: There were 4404 craniofacial trauma patients and 72 of them met the criteria of life-threatening traumatic oronasal hemorrhage. Thirty-seven patients were included in this study: eleven patients reached hemostasis with conventional management, while 26 patients required TAE to achieve hemostasis. Shock index (heart rate/systolic blood pressure) among patients required TAE to achieve hemostasis was statistically significant higher than patients reached hemostasis with conventional management ($p=0.003$). There was no sequelae or major complications after TAE. There were six patients died from traumatic brain injury. Non-TAE related morbidity and mortality have no significant difference between these two groups.

Conclusion: We demonstrated TAE could be an effective treatment for life-threatening oronasal bleeding among patients with severe craniofacial trauma. Initial presentation with shock index > 0.9 was a strong independent predictor of angiographic hemostasis and TAE should be initiated as soon as possible.

Reference:

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