176 Ischemic Stroke Subtype as a Predictor of Subsequent Myocardial Infarction, Stroke and Death

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Study Objective: To assess whether ischemic stroke subtype predicts subsequent vascular events and death.

Methods: A consecutive cohort of 1147 patients presenting with acute ischemic stroke over a 4-year period to an academic emergency department was enrolled. The patients were prospectively followed. Statistical analyses: the variables collected were age, sex, stroke severity at presentation measured with the National Institutes of Health Stroke Scale (NIHSS), functional outcome at hospital dismissal measured with the modified Rankin score, and subsequent myocardial infarction, transient ischemic attack (TIA), new stroke or death. Stroke subtype was categorized according to the TOAST classification: 1.- large vessels disease, 2.- cardioembolic, 3.- small vessels (lacunar), 4.- other causes (hypercoagulability, dissection, etc), and the category 5 was subdivided in 5a.- for those presenting with 2 or more causes of stroke, 5b.- no cause found, and 5c.- insufficient information.

Parametric test were used for normally distributed variables, and mean was reported. Nonparametric test (Wilcoxon/Kruskal-Wallis, Rank Sums) were used for non-normal distributed data, and median was reported. Chi-square test and Fisher exact test were used in the contingency tables. All p-values were two-sided.

Results: A total of 1147 patients were included. The mean +/− standard deviation age was 72.1+/−14.7 years, 608 (53%) were male. A total of 29% had coronary artery disease, 74% hypertension, 45% hyperlipidemia, 25% diabetes mellitus, 25% atrial fibrillation or flutter, 17% were active smokers, 20% had a previous stroke, and 15% a previous TIA. The median NIHSS at admission was 5 (interquartile range 2 to 10), the mean functional outcome (Rankin score) was 3.0+/−1.6. The stroke subtype was distributed as follows: 16.2% large vessels, 33.7% cardioembolic, 14.3% lacunar, 5.6% others, and 30.2% unknown or more than one cause (6.7% 5a, 12.6% 5b, and 10.9% 5c). The most common subsequent event was death in 363 patients (31.7% of the cohort), followed by a new stroke in 46 patients (4%), myocardial infarction in 44 (3.8%) and TIA in 25 (2.2%), in a 4-year period. Cardioembolic strokes had a higher stroke severity (NIHSS) and worse functional outcome at discharge when compared with other stroke subtypes ($p<0.0001$). The frequency of subsequent myocardial infarction was higher in cardioembolic strokes compared to other subtypes. The frequency of a new stroke was higher in patients with insufficient information to assign TOAST classification (6.6%), followed by those with large vessels disease (6%). Death was more frequent in the unknown group (60%), followed by for those presenting with 2 or more causes of stroke (39%) and cardioembolic strokes (38%).

Conclusion: Determining the subtype of ischemic stroke is a powerful tool to predict patients at higher risk of a subsequent myocardial infarction, new stroke and death in the following years. Patients classified as unknown etiology and those with cardioembolic strokes have the highest mortality. In terms of morbidity, patients with large-vessels disease have the higher recurrence of strokes, and cardioembolic are associated with a higher rate of myocardial infarctions.

177 Lessons Learned in a Colombian Civil Hospital About the Management of Patients Injured By Landmines

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Background: There are approximately 1100 land mine victims per year as result of the civil-war conflict in Colombia. Two thirds of the victims are soldiers and 20% of them die. Fundación Clínica Valle del Lili (FVL) is one of the 5 referral hospitals defined by the Colombian Army for these patients referral and/or definit treatment.

Study Objectives: To describe, quantify and characterize patterns of injury from landmines in terms of distribution and severity of injury, times of care and transfer, need for blood product transfusions, length of stay and disability at discharge.

Methods: Design: Retrospective observational cohort study.

Setting: Trauma I civil hospital.

Type of Participants: Landmine-injured soldiers referred from areas of combat.

Results: This study reviewed the medical charts from landmine-injured patients seen at FVL between January 2004 and June 2007. Total of patients: 37 male soldiers. Age ranged between 19 and 34 years, (Mean (M) 24.7 years, SD +/− 4.3). The transport methods and times of arrival to the ED are depicted in the following table:

Table. Transport method and intervals between event and ED arrival (hours)

Transport Mean	n	Range	Mean (SD)	Median
Helicopter	29	1 - 29	8.2 (+/-8.1)	4.0
Ground	8	3 - 14	7.0 (+/-4.0)	5.0
Total	37	1 - 29	7.9 (+/-7.4)	4.5

The systolic blood pressure at arrival ranged between 79 and 172 (only 2/37 patients were hypotensive); 3/37 patients were tachypneic. The ISS fluctuated between 1 and 34, with (M 15, SD +/− 9.7). Fifty per cent of the injured had an ISS ≥ 12. The systems injured were: Extremities 25/37; External 8/37; Face 14/37; Head and Neck 11/37; Abdomen 1/37; Thorax 1/37. The hospital length of stay ranged between 0 and 20 days (M 11.3 days SD +/− 4.3).

10/37 patients required ICU attention (M 7.5 days). Twenty-seven patients required surgery: primary amputation of the leg was performed in 13; ORIF in 12 and ocular surgery in 6. Twenty patients were transfused with packet RBC (M 4.0 SD +/− 2.2); 7 with FFP transfusion (M 3.4 units SD +/−1.8)); only 2 patients needed platelets transfusion (6 and 1 units) and only 1 patient needed Cryoprecipitate (6 units). Two patients had POP wound infection. Infection of traumatic wound occurred in 3/37 (1 required surgical debridement). The mortality for these 37 patients was zero.

Only 18/37 injured returned to outpatient visit follow-up and 5 of them were sent to definitive management and rehabilitation.

Conclusions: The times of transfer were prolonged and a significant proportion of patients had critical trauma. The rate of infections was low. A significant proportion of the patients had critical trauma but we had no mortality in this study. Most of the patients required surgical procedures of the extremities; leg amputation was the most common procedure in these young men. The rate of infections was low but the increased length of stay and blood product transfusions were probably due to the level of injury found in these patients.

178 Relationship Between Training for Pandemic Flu and Level of Performance in Drill

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Study Objective: A basic component of emergency preparedness is an extensive and integrated training program. The aim of this study was to investigate the relationship between a training program and level of knowledge for dealing with pandemic flu with performance in an avian flu drill.

Methods: Training programs for the management of pandemic flu and level of knowledge were evaluated and analyzed in relation to scores obtained on an avian flu drill using Spearman's rho and exact p. values (1 tailed). Emergency department personnel also took a multiple choice questions examination aimed at evaluating their level of knowledge. Reliability of the scales was determined using Chronbach's Alpha and item total correlations were used to determine the validity of scale items.

Results: Overall ratings of training programs for pandemic flu were very high or high in the majority of the 24 hospitals evaluated (Mean 85, SD 22). The following parameters of the training program correlated significantly with performance on the avian flu drill: Comprehensiveness 0.91 p=9/162e-009, content of the training 0.612, p=0.00042, designating personnel for training, 0.472 p=0.0121 training materials 0.355, p=0.043. Reliability of the scale for the evaluation of the training programs was 0.82. Reliability of two subscales of the training programs were: comprehensiveness 0.777, and designating personnel for training, 0.372. No correlation was found between level of knowledge and performance on the drill.

Conclusion: Development of a training program is very important in ensuring emergency preparedness. The key domain of training appears to be the comprehensiveness of the training programs. Use of knowledge tests should be further investigated, as they do not appear to correlate with the level of emergency preparedness for pandemic flu, as displayed in a drill.