Conclusion: The DECSA trial provides decisive insight in the effectiveness of dexamethasone therapy compared with surgical evacuation in symptomatic patients with a chronic subdural hematoma.

BRAIN AND SPINE 1 (2021) 100307 100649
SUPERVISED VALSALVA MANEUVER AFTER BURR HOLE EVACUATION OF CHRONIC SUBDURAL HEMATOMA: A PROSPECTIVE COHORT STUDY

S.-Y. Won [1], D. Dubinski [2], B. Behmanesh [3], J. Bernstock [4], F. Keil [5], T. Freiman [2], J. Konczalla [3], V. Seifert [3], F. Gessler [2]. [1] *Rostock University, Neurosurgery, Rostock, Germany;* [2] *Rostock, Neurosurgery, Rostock, Germany;* [3] *Goethe University, Neurosurgery, Frankfurt, Germany;* [4] *Brigham and Women`s Hospital, Neurosurgery, Boston, United States;* [5] *Goethe University, Neuroradiology, Frankfurt, Germany*

Background: Research on chronic subdural hematoma (cSDH) management has primarily focused on potential recurrence after surgical evacuation. Herein, we present a novel postoperative/non-invasive treatment that includes a supervised Valsalva maneuver (SVM), which may serve to reduce SDH recurrence. Accordingly, the aims of the study were to investigate the effects of SVM on SDH recurrence rates and functional outcomes.
Methods: A prospective study was conducted from December 2016 until December 2019 at the Goethe University Hospital Frankfurt. Of the 204 adult patients with surgically treated cSDH who had subdural drains placed, 94 patients were assigned to the SVM group and 82 patients were assigned to the control group. The SVM was performed by having patients blow into a self-made SVM device at least two times/h for 12 h/day. The primary end-point was SDH recurrence rate, while secondary outcomes were morbidity and functional outcomes at 3 months of follow-up.
Results: SDH recurrence was observed in 16 of 94 patients (17%) in the SVM group, which was a significant reduction as compared with the control group, which had 24 of 82 patients (29.3%; p = 0.05) develop recurrent SDHs. Further, the infection rate (e.g., pneumonia) was significantly lower in the SVM group (1.1%) than in the control group (13.4%; p < 0.001; odds ratio [OR] 0.1). At the 3-month follow-up, 85 of 94 patients (90.4%) achieved favorable outcomes in the SVM group compared with 62 of 82 patients (75.6%) in the control group (p = 0.008; OR 3.0). Independent predictors for favorable outcome at follow-up were age (OR 0.9) and infection (OR 0.2).
Conclusion: SVM appears to be safe and effective in the post-operative management of cSDHs, reducing both recurrence rates and infections after surgical evacuation, thereby resulting in favorable outcomes at follow-up.

BRAIN AND SPINE 1 (2021) 100307 100650
PREOPERATIVE NEUTROPHIL TO LYMPHOCYTE RATIO AS A PREDICTOR OF CHRONIC SUBDURAL HEMATOMA RECURRENCE

M. Dobran [1], E. Carrassi [1], M. Capece [1], D. Aiudi [1], R. Paracino [1], M.R. Fasinella [1], R. Ricca [1], M. Iacoangeli [1], O. Porrini Prandini [1]. [1] *Università Politecnica delle Marche, Clinica di Neurochirurgia, Ancona, Italy*

Background: Chronic subdural hematoma(CSDH) is a common pathology, frequently encountered in neurosurgical practice, with a recurrence rate ranging from 2 to 37%. Recently, several studies have suggested the possible relationship between the increase in Neutrophil to Lymphocyte Ratio (NLR) and the poor outcome of different pathologies, such as cerebral haemorrhage. The aim of the current study is to investigate the potential connection between the pre-operative NLR value and the risk of CSDH recurrence.
Patients and Methods: From January 2015 to December 2019, 261 patients affected by CSDH were surgically treated in our Department. Data regarding patients' baseline characteristics and their hematologic parameters were retrospectively collected from medical records, while the maximum thickness of the hematoma was measured on pre-operative CT scans. Patients with concomitant cerebrovascular, infective, inflammatory, hematological, or neoplastic diseases, INR > 1,5, previous craniotomy, ventriculo-peritoneal or ventriculo-atrial shunt or missing data were excluded from the study.
Consistently with the exclusion criteria, 104 out of 262 patients were enrolled in this study.
Minimum and maximum follow-up were 4 months and 3 years respectively.
Results: Male sex was the most represented in both groups. Mean age was 77,5±14,1 and 77,2±14,2 years respectively in the non-recurrence and

recurrence groups (p value: 0,924). Maximum hematoma thickness resulted 2,2±0,5 cm in patients without recurrence and 2,4±0,6 cm in those with CSDH recurrence (p value: 0,113). Mean NLR was higher (12,7±10,4 vs 6,3±4,8) in the recurrence group than in the non-recurrence one. This difference resulted significant (p value: 0,001) at statistical analysis.
Conclusions: Pre-operative NLR is an easily obtainable marker which may be helpful in clinical practice to stratify the risk of CSHD recurrence.

BRAIN AND SPINE 1 (2021) 100307 100651
A MATTER OF FRAILTY, NOT AGE – SUBDURAL HEMATOMA IN THE ELDERLY

S. Hernandez Duran [1], V. Rohde [1], C. von der Brelie [1]. [1] *Universitätsmedizin Göttingen, Neurosurgery, Göttingen, Germany*

Introduction: As life expectancy continues to rise in Western countries, neurosurgeons are confronted with an increasing number of geriatric patients suffering from chronic subdural hematoma (CSDH). Studies have determined geriatric patients to be at higher risk for surgical complications, and age has been deemed a risk factor for poor outcome in surgical series of CSDH. In this study, we aimed to determine if frailty, and not age, can better stratify the risk of elderly patients with CSDH for poor outcome and mortality.
Methods: We conducted a matched cohort study of elderly patients undergoing twist-drill craniostomy under local anesthesia for CSDH. We evaluated patients based on traditional predictors of poor outcome, such as Glasgow Coma Scale (GCS) at admission, Markwalder grade, anticoagulant use, and hematoma volume. We assessed their frailty with the Clinical Frailty Scale (CFS) and their outcome based on the Glasgow Outcome Scale (GOS). Good outcome was defined as GOS 4-5. We stratified patients in two groups according to age, ≥85 years, and ≥65<85 years.
Results: A total of 42 patients aged 85 or older were identified and matched to a cohort of 42 patients aged between 65 and 84. In an ANOVA analysis, no statistically significant differences were observed in the baseline characteristics of both groups. Good outcome was observed in n=28/42, 66.7% of younger patients, and n=24/42, 57.1% of older patients, with mortality rates of 9.5% and 4.8%, respectively. These differences were not statistically significant. In a linear regression analysis, GCS and CFS were predictors of outcome and mortality, but not age.
Conclusion: In a continuously aging population, clinical assessment of patients with CSDH based on their premorbid functionality and frailty appears to be more informative than age alone for outcome prognostication.

5.4 Traumatic Spinal Cord Injury
BRAIN AND SPINE 1 (2021) 100307 100652
PREVALENT YET PREVENTABLE CAUSES OF TRAUMATIC BRAIN INJURY IN LOW-MID INCOME COUNTRIES & THE ROLE OF LAW ENFORCEMENT

N.-u.-H. Maria [1]. [1] *Punjab Institute of Neurosciences, Lahore, Pakistan*

Objective: To know the preventable yet prevalent causes of traumatic brain injury in LMIC.
Methodology: Total 180 patients at Lahore General Hospital /Punjab Institute of Neurosciences, Lahore. The distribution and relationships of TBI was assessed with gender, age, type of trauma, traumatic cause and area of incidence recorded. The commonest causes of TBI were determined and the commonest age group affected by TBI were assessed.
Result: Majority of head injuries 28% were caused by motorbike accidents,23% were fall from roof,18% were 3wheeled vehicles (Chinqchi) accidents,15% were car crashes,8% pedestrian injuries,4% fall from stairs and 4% were misc. from domestic fights,home accidents and ground level falls. Male predominance. 27% fell in the age range of <15yrs, 32% were in the age range 15-30yrs, 33% 31-46yrs. <15yrs age group predominantly involving children of 3-7yrs. Many of the falls especially in the pediatric age group were from roofs .In urban areas there are laws for licensing the bike riders and registering the vehicles as well as traffic laws and use of helmet and 2person/bike policy. We noticed that out of all patients who presented with TBI due to bike accidents, only 34% were from urban areas and the rest were from rural areas. The proportion of young aged bikers was higher in the rural areas. Car crashes were majorly from urban areas 73% .Falls from roof were 76% rural areas.
Conclusion: The commonest causes of traumatic brain injury in LMICs are preventable and it indicates a need to address these potentially preventable causes by allowing only licensed and trained drivers, improving road systems, imposing strict traffic laws, mandatory helmet use, allowing only 2 persons on