the ED or <2h of admission (3.2% vs 0.05%) (all p<0.0001). Catheter-directed alteplase was given to 5 submassive PE patients and IV alteplase to 25, 24 of whom received 100 mg and 1 received 50 mg IV. ICU admission was higher (11.2% vs 2.5%) and home treatment less common (1.3% vs 11.3%; both p<0.0001); 30d all-cause mortality was higher (5.2% vs 3.5%; p=0.03) among submassive PE patients.

Conclusion: Nearly 80% of ED patients were at least partially screened for submassive PE. Those with evidence of submassive PE had higher mortality, despite more aggressive care. Further studies should investigate the impact of routine screening for submassive PE.

58 Prevalence and Prognostic Value of Proximal Clot Location in Emergency Department Patients With Acute Pulmonary Embolism Presenting With Presyncope or Syncope

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Background: In patients with acute pulmonary embolism (PE), it is assumed that a more proximal clot is required to cause obstruction or dysrhythmia sufficient to impede cerebral perfusion resulting in presyncope or syncope (combined as (pre)syncope). We characterized clot location in PE patients with (pre)syncope and evaluated associations with mortality.

Methods: This retrospective cohort study included adults with PE diagnosed by CT pulmonary angiography in 21 community EDs from 01/2013 through 04/2015. We combined electronic health record extraction with structured manual chart abstraction. Syncope was defined as an abrupt, transient, complete loss of consciousness with loss of postural tone, with rapid, spontaneous recovery, and presyncope as an abrupt, transient feeling of nearly fainting or losing consciousness as documented by the EM or consultant physician. Non-specific dizziness and light-headedness were not included. Categorization was confirmed by two abstractors and arbitrated, if needed, by a third. Proximal clots involved lobar or main pulmonary arteries. We defined PE Severity Index (PESI) Classes IV-V as higher risk. Massive PE had sustained sBP <90 mmHg over 15 minutes, received vasopressors or required CPR. Submassive PE were non-massive with elevated troponin, B-type natriuretic peptide, or right ventricular strain on echocardiogram. We estimated adjusted odds ratios (aORs) with 95%CIs for candidate predictors of 30d all-cause mortality, including (pre)syncope, proximal location, higher-risk PESI classes, and submassive or massive PE.

Results: Among 2,716 PE patients, 172 (6.3%) presented with (pre)syncope. Compared with their non-(pre)syncope counterparts, (pre)syncope patients more commonly had proximal emboli (68.6% vs 53.0%; p<0.0001), higher-risk PESI scores (52.9% vs 40.1%; p<0.001), massive PE (5.2% vs 0.6%; p<0.0001), submassive PE (51.7% vs 29.6%; p<0.0001), and 30d mortality (8.1% vs 3.8%; p<0.01). Only a higher-risk PESI class was an independent predictor of 30d mortality: aOR 9.5 (95%CI 5.4-16.6). Interaction terms between (pre)syncope and PESI, clot location and (sub)massive physiology were non-significant.

Conclusion: Two-thirds of PE patients with (pre)syncope had proximal clots. Neither (pre)syncope nor location were independent predictors of 30d mortality when adjusting for high-risk PESI classes.

59 Prevalence of Metabolic Syndrome in Patients With Venous Thromboembolism

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Background: Emergency physicians increasingly play a role in the diagnosis and treatment of venous thromboembolism (VTE). While emergency care providers are well aware that VTE accompanies chronic disease, fewer may be aware that metabolic syndrome (MetSyn) is associated with a hypofibrinolytic state, leading to increased treatment failure and VTE recurrence rate. Moreover, emergency-care initiated efforts (e.g., exercise, diet and drug treatments) can reduce this impact. Current data linking VTE with MetSyn are limited to retrospective analyses of small databases. The purpose of this study was to measure the prevalence of formal diagnosis of MetSyn and its defining components in VTE, utilizing a large statewide database.

Methods: We used the statewide Indiana Network for Patient Care (INPC) database. All patients with a diagnosis of VTE (based on ICD-9 or ICD-10 coding of either pulmonary embolism [PE] or deep vein thrombosis [DVT]) from 2005 to present were included in this query. We determined the frequency with which patients with the diagnosis of VTE also carried either a formal diagnosis of MetSyn (based on ICD coding) or the individual components of MetSyn, with a MetSyn diagnosis requiring at least 3 of the following criteria: hypertension, hyperlipidemia, glucose intolerance and obesity.

Results: Analysis included a total of 194,486 patients with VTE. Of the 68,331 patients with PE, 1,464 (2%) had a formal diagnosis of MetSyn based on ICD coding, while 19,188 (28%) met the criteria for MetSyn based on its individual components. Hypertension was the most common component of metabolic syndrome found concurrently in patients with PE, present in 66%, followed by hyperlipidemia (44%), glucose intolerance (30%) and obesity (27%). Comparatively, of the 155,225 patients with DVT, 2,629 (2%) had a formal diagnosis of MetSyn, while 36,543 (24%) met the criteria for MetSyn. Again, hypertension was the most common co-existing diagnosis in patients with DVT, occurring in 63%, followed by hyperlipidemia (39%), glucose intolerance (27%) and obesity (22%).

Conclusion: MetSyn is common with VTE, occurring in 28% of patients with PE and 24% with DVT, but is seldom diagnosed. These data support the need to recognize MetSyn in patients with VTE and proactively initiate appropriate therapies to reduce treatment failure and recurrence.

60 D-Dimer in Pediatric Pulmonary Embolism

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Background: In adults, D-dimer is used to aid clinicians in the diagnosis of pulmonary emboli (PE). D-dimer has not validated in pediatric patients and the role of D-dimer in evaluating pediatric patients for a PE is unknown. Avoidance of unnecessary radiation in pediatric patients is desirable in order to decrease the lifetime risk of malignancy. Clinicians must balance the risk of radiation with the desire not to miss a PE. D-dimer may be useful in this context. This study evaluates D-dimer assay in pediatric PE patients.