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Methods: This retrospective study was a retrospective chart analysis of 684 asymptomatic TIA patients admitted to the ED OU, over a 20-month period. Patients were divided by significant or no significant findings for either the brain or neck MRA or both.

Results: There were no significant findings for either the brain or neck MRA in 70.8% (n=484) of patients. 9.8% (n=67) had significant findings for only the neck MRA. 12.0% (n=82) of patients had significant findings for only the brain MRA. 7.5% (n=51) had significant findings for both brain and neck MRA. Significant findings included moderate to severe vertebral stenosis and/or occlusion of the vertebral arteries, carotid, aneurysms (saccular and fusiform), subclavian steal syndrome, and thyroid nodules. Clinically significant findings were noted in 29.4% of the 684 patients.

Conclusion: With the use of MRA of the brain and neck, we are discovering more clinically significant findings that may have gone years undiagnosed. Based on this data, it seems fitting that the use of MRI of the brain with MRA of the brain and neck should be utilized for evaluation of TIA patients when able, thus replacing prior workups such as, carotid ultrasound.

Clinical Utility of Coronary Computed Tomographic Angiography in the Emergency Department at Naval Medical Center Portsmouth

Woolfet G, Stuart S, Oost A, Friedrich E, Gasparo M/Naval Medical Center Portsmouth, Portsmouth, VA

Study Objectives: The purpose of this study is to determine the effect of coronary computed tomographic angiography (CCTA) on length of stay (LOS) and resource utilization, in the emergency department (ED) of a single military treatment facility, in patients presenting with low risk chest pain. This study was a retrospective chart review of approximately 300 patients who presented to the NMCP ED with chest pain and for whom CCTA was ordered as a disposition strategy.

Methods: This study compared length of stay for patients, age 50-75, who received CCTA for chest pain evaluation versus an equal number of age, sex, and HEART score matched controls, who also presented with chest pain but did not have CCTA evaluation. Additional data was collected regarding primary care (PCM) and cardiology follow-up, and follow-on testing or procedures conducted as a result. The chart review was conducted using electronic medical records (Ttsystems & AHULTA) and radiology review software (Synapse - IMPAX). The study examined records from the initiation of CCTA on 01 April, 2017 until 31 May, 2019.

Results: A total of 133 patients were included in the CCTA cohort with 126 patients compared as matches. Across all patients with low risk chest pain, those for whom CCTA was ordered had significantly longer average LOS of 8.8 hours (95% CI 7.9-9.6, P<0.05) versus matched patient avg LOS of 5.8 hours (95% CI 5.3 - 6.4). Subgroup analysis revealed that patients with HEART scores of 3 to 5 did not have statistically significantly different average LOS due overlapping confidence intervals.

Patients who received CCTA in the ED were less likely to have additional outpatient follow-up, both from primary care (32% vs. 58%) and cardiology (38% vs. 50%). Although the CCTA group received fewer follow-on testing or procedures (28% vs. 38%), they received more coronary catheterizations (13 vs. 7 (95% CI 0.71 - 4.78) with a higher non-stent/no disease rate (5.3% vs. 1.6%).

Conclusion: The current implementation of CCTA in the Navy-Wide Low Risk Chest Pain Protocol did not reduce the length of stay in the emergency department at NMCP. Patients who received CCTA less commonly made follow-up appointments and had less follow-on testing. However, CCTA patients were more likely to have catheterizations and more likely to have a negative catheterization.

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