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Abstract 42: Post 2016 UK NICE Guideline Cardiac CT Investigation of Chest Pain: To Investigate the Relationship Between Age, Presentation and Cardiac CT Results

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Introduction: It is now two years since the latest iteration of the UK's NICE CG-95 guidelines for the investigation of stable chest were introduced, which recommended cardiac CT as the 1st line imaging investigation. The aim of the study was to investigate the relationship between patient age, presentation and cardiac CT results, since the introduction of these guidelines, to act as a starting assessment on how the guidelines were being interpreted / utilised.

Methods: The Patient Information System for our medium sized district general hospital was interrogated over a 6 month period that followed the introduction of the latest iteration of the NICE guidelines. The following variables were ascertained (1)Patient age (2)Presentation (typical v atypical v no chest pain) (3)Outcome (normal v medical v interventional management). The results were analysed using SPSS statistical software.

Results: There were 516 patients in the cohort over the 6 month period examined with an approximate 1:1 male to female ratio. Age range was 17 - 88 years. The ages were then divided into bands, starting at 16 years and increasing in increments of 4 years, with the last band being 88-92years. The average (modal) age band was 52-56years. Fourteen percent of patients did not present with any chest pain at all, whilst 7% presented with typical chest pain. The results for the cardiac CT studies revealed 50% did not have any coronary artery disease on the scan. Thirty-three percent had coronary artery disease, that was managed medically in the first instance, whilst the remaining 17% had coronary artery disease that was deemed severe enough on the cardiac CT's to warrant an invasive angiogram.

Conclusions: Putting cardiac CT as the first line imaging investigation for the investigation of stable chest pain has led to a significant increase in the number of these tests performed. Patients as young as 17 years have had cardiac CT's, whereas no one below the age of 35 years was referred for an invasive angiogram on the basis of the cardiac CT results. Additionally there were large percentages of patients who did not present with chest pain, or who presented with atypical chest pain, who were referred for cardiac CT's. The result is that, in our cohort, 50% of test results were normal. Given the potentially harmful effects of ionising radiation, the results of our study suggests there may need to be a more judicious approach to the utilisation of cardiac CT's, especially in the younger cohort of patients.

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