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THE USE OF GRACE SCORE TO RISK STRATIFY AND THE OUTCOMES OF A LOW RISK COHORT WITH ACUTE CORONARY SYNDROME IN A DISTRICT GENERAL HOSPITAL

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10.1136/heartjnl-2021-BCS.69

Introduction The Global Registry of Acute Coronary Events (GRACE) score is used to risk stratify patients admitted to hospital with non-ST elevated acute coronary syndrome (NSTEMACS). The tool scores patients on the basis of age, physiological observations, symptoms, troponin measurements and ECG changes. The score helps stratify patients into low, medium and high risk NSTEMACS in order for clinicians to prioritise their required treatment and/or intervention to improve mortality.

Purpose We analysed the clinical outcomes and treatments received in a cohort of patients classified as low risk according to the GRACE score.

Methods We collected the data for a cohort of patients admitted to a medium sized district general hospital (DGH) which offers angiography and coronary intervention within working hours. We used the acute take list to identify the cohort of patients being treated as NSTEMACS between June 2020 and August 2020. From the data collected we risk stratified the patients using the GRACE score as high, medium and low. We further analysed the low risk population to assess clinical outcomes and treatment received.

Results A total of 158 patients were analysed. 85 patients (54%) were categorised as low risk. In the low risk population 56% were male and 34% were female with an average age of 55.8 (49.7-62.1). Within the low risk population 22 patients (26%) went forward to have an angiography following advice of the treating team. In those having an angiogram, 8 patients (36%) required a stent. Overall 8 out of the 85 patients categorised as low risk (7% of patients) required a stent insertion.

Conclusion The GRACE score is used to predict patients with higher mortality rates therefore prioritising their treatment and time to PCI. Here 7% of patients proceeded to coronary stent implantation due to high grade coronary lesions in the context of low risk NSTEMACS. The population seen at our DGH is diverse and may be younger patients at the time of index presentation with a higher burden of disease. However this raises the question whether risk stratification scores such as GRACE account sufficiently for socioeconomic and ethnic differences in populations.

Conflict of Interest None

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TREATMENT-RISK PARADOX IN NON ST-ELEVATION ACUTE CORONARY SYNDROMES: HOW DOES THE ANAEMIA CONTRIBUTE?

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10.1136/heartjnl-2021-BCS.70

Background It is not long since researchers started to shed light on management disparities like treatment-risk paradox in NSTEMACS in emerging countries, including Iraq. We find it is crucial to address the possible contributing factors for this phenomenon, one of the proposed underlying causes for treatment-risk paradox is anaemia.

Timing to Catheterization According to Anemic Status and GRACE Risk Class in NSTEMACS

Abstract 70 Figure 1

Purpose This study aimed to investigate the impact of anaemia on decision and timing of intervention in NSTEMACS.

Methods Admitted patients with NSTEMACS were prospectively recruited, their baseline characteristics, management strategy (invasive vs conservative) and timing to intervention if done; all were recorded. Then they were grouped into anaemic (Hb<13 in male, <12 in female) vs non-anaemic, GRACE risk score was calculated, so stratified into low, intermediate and high with scores <109, 109-140 and >140 respectively.

Results Total n.=183, 32.8% were anaemic, anaemic patients were older (62.6±10.9 vs 56.8±11.6, p=0.001), more to be females (45% vs 24.4%, p=0.005) and more to report prior history of IHD (65% vs 44.7%, p=0.01), anaemic patients were less to be smokers versus non-anaemic counterparts (23.3% vs 37.4%, p=0.04). Anaemic group were more to have dyspnea at presentation (48.3% vs 26.8%, p=0.004). Anaemic patients were more at high GRACE risk class (35% vs 30.1%) and more to develop acute heart failure (AHF) (35% vs 15.4%, p=0.003) than their non-anaemic counterparts, yet, they were less to be treated invasively (48.3% vs 72.4%, p=0.001). However, at high risk class they were more to be catheterized than non-anaemics and more to be catheterized within <72 hours (54.5% vs 43.8%) while at low risk class non-anaemics were more to be catheterized within < 72 hours (34.7% vs 28.6%), see figure 1.

Conclusion Anaemia in NSTEMACS occurs more in elderly, females and high GRACE risk class patients, anaemic patients had higher rate of AHF and were less to be catheterized in general, yet more to be catheterized if they were at high risk class but with delayed timing. Future studies are warranted to provide further insights on risk stratification and targeted therapies for those patients.

Conflict of Interest None

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THE EFFECT OF THE COVID-19 PANDEMIC ON TIME TO ANGIOGRAPHY AND OUTCOMES IN PATIENTS PRESENTING WITH NON-ST ELEVATION MYOCARDIAL INFARCTION

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10.1136/heartjnl-2021-BCS.71

Abstract 71 Table 1 Comparison of NSTEMI patients in 2019 and 2020

	2019	2020	p-value
Age (years)	71.2 ± 12.2	65.0 ± 12.1	p<0.01
NSTEMI patients	56	59	P=NS
NSTEMI undergoing angiography	50	53	P=NS
Median Time to angiography (hours)	68.6	14	p<0.01
Median length of stay (days)	5 (IQR 2:8)	2 (IQR 1:4)	p<0.01
Referral to cardiac rehabilitation	77.4%	84.5%	P=NS
Prescription of secondary prevention medication	69.8%	72.4%	P=NS

Median for Hospital stay 2020 (2, IQR 1:4) **Abstract 71 Figure 1** Box and Whisker Plot for median hospital stay for NSTEMI patients in 2019 and 2020
Median time for Hospital stay 2019 (5, IQR 2:8)

Background The covid-19 pandemic has had a profound impact on healthcare service delivery. Acute cardiovascular care however remains a priority despite the pandemic. Patients presenting with non-ST elevation MI (NSTEMI) have been poorly characterized during the pandemic.

Methods We conducted a retrospective study of patients diagnosed with NSTEMI during the peak of the pandemic between April-May 2020 at our tertiary centre in the UK. Data were collected from electronic patient clinical records including time from admission to angiography, length of stay, mortality, prescription of secondary prevention pharmacotherapy, and referral to cardiac rehabilitation. We compared this data to the same time period in 2019.

Results As can be seen from table 1, in 2020, the mean age, median time to angiography, and length of stay were all

significantly lower than the control period of 2019. Prescription of secondary prevention medication (Aspirin, P2Y12 inhibitor, Beta-blocker, Statin, and ACEi/ARB) and referral to cardiac rehabilitation also improved in 2020, however, neither was statistically significant. During the 2020 period, 1 patient died due to late presentation NSTEMI and multi-organ failure. There were 3 deaths in 2019: complications following coronary bypass surgery, upper GI bleed and a subarachnoid haemorrhage. Table 1 Comparison of NSTEMI patients in 2019 and 2020
p-value
Age (years) 71.2 ± 12.2 65.0 ± 12.1 p<0.01
NSTEMI patients 56 59 P=NS
NSTEMI undergoing angiography 50 53 P=NS
Median Time to angiography (hours) 68.6 14 p<0.01
Median length of stay (days) 5 (IQR 2:8) 2 (IQR 1:4) p<0.01
Referral to cardiac rehabilitation 77.4% 84.5% P=NS
Prescription of secondary prevention medication 69.8% 72.4% P=NS.

Conclusion Our results show that the mean age of the patients presenting with NSTEMI during the peak of the Covid-19 pandemic was younger suggesting that elderly patients failed to present. Compared to 2019, there was a significant improvement in patient treatment times with a significantly shorter stay in the hospital, probably as a result of the reduction in elective activity allowing un-restrained access to the catheter labs. We also saw improvement in prescription for secondary prevention and referral to cardiac rehabilitation services during this time suggesting that there may have been improved focus on these aspects of care again.

Conflict of Interest No

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ACUTE KIDNEY INJURY FOLLOWING PERCUTANEOUS CORONARY INTERVENTION FOR ACUTE CORONARY SYNDROMES – INCIDENCE, AETIOLOGY, RISK FACTORS AND OUTCOMES

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10.1136/heartjnl-2021-BCS.72

Background Acute kidney injury (AKI) is a recognised complication of percutaneous coronary intervention (PCI). We investigated the predictors, aetiology and long-term outcome of AKI following PCI for acute coronary syndromes (ACS).

Methods Two thousand nine-hundred and seventeen patients undergoing PCI for ACS were retrospectively investigated. AKI incidence was identified and cardiovascular and demographic risk factors, and dates of death were collected.