41st Annual Scientific Meeting of the Society for Academic Primary Care

ABSTRACT SUBMISSION

Title: A systematic review of whether people with Diabetes mellitus experience less chest pain when having a myocardial infarction (MI).

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Abstract No. 0180

Title A systematic review of whether people with Diabetes mellitus experience less chest pain when having a myocardial infarction (MI).

Type A. Presentation (oral or poster)

Abstract

The problem

People with diabetes mellitus (DM) are more likely to have a myocardial infarction (MI) compared to people without diabetes and they have a higher mortality from their myocardial infarctions. DM autonomic neuropathy may lead to reduced pain perception and so under recognition of symptoms as anginal/ infarction pain by the patient and their clinician. This might have important implications as there may be delay in seeking assistance; as early treatment of MI reduces both morbidity and mortality. There is conflicting research in this area.

The approach

Standard methods including searches of Pubmed / Embase using MOOSE criteria for meta analysis of observational data. Searches and data extraction were done by 2 people independently. Data was meta-analysed.

Findings

Searches identified 1566 abstracts, 19 meeting our full criteria. Authors used a variety of classifications of symptoms such as absence of chest pain (CP), and typical /atypical (T/AT) classification. Nineteen papers identified patients with CP /no CP symptoms during an MI, those with DM having an odds ratio (OR) for CP during MI of 0.74 (0.62 to 0.89 n=471,723 I2 91%). However, one study dominates the review with 20 times the study size of all other studies and substantially contributes to this finding. Conversely three studies reported using T/AT showed a non significant increase in DM having typical symptoms OR 1.68 (0.91-3.11 n=492 I2 0%).

Eight papers identified other non pain symptoms such as increased breathlessness among DM (OR 1.33 (1.17-1.50 n=6069 I2 0%). For other symptoms, we found slightly less extra cardiac pain (arm, neck pain 4 studies n=47264 studies (OR 0.78 0.68 to 0.90 I2) but no impact on sweating (7 studies OR 0.98 (0.86-1.13 n=4300 I2 0%).

Consequences

Patients with DM experience less CP, and more non pain symptoms such as breathlessness during their MI. This raises important issues for patients with DM (education about their disease) and their clinicians. As primary care clinicians are in frequent contact with this group attempts to change (lower) the threshold for referral to secondary care could be explored, which is problematic in the current NHS climate. Limitations of the review include significant study heterogeneity, issues around recruiting on the basis of CP (selection bias), identifying patients who are admitted to hospital (survivor bias) and failure of studies to address gender, age and morbidity disparities between groups.

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Author present Yes
Methodologies Quantitative methodology
Categories Diabetes
Categories2 Heart disease
Categories3 Managing long term conditions
Presentation Oral
Prior publication No
Medical student No
Young or novice researcher award No
NAPCRG / SAPC travel award Yes
Submitted to RCGP No