



# Guideline 14.1.2 The use of a gastro intestinal cocktail for the diagnosis of acute coronary syndrome in adult emergency department patients presenting with chest pain

## Introduction

The Gastrointestinal (GI) cocktail (a mixture of liquid antacid, viscous lignocaine, and often an anticholinergic agent) or 'pink lady' has been suggested to be effective in treating symptoms of dyspepsia in patients presenting to the emergency department<sup>1</sup>. The GI cocktail however, has been proposed to be useful not only for the therapy of patients with indigestion (gastro oesophageal reflux), but has also been used as a diagnostic aid for differentiating cardiac ischemic chest pain from chest pain of gastroesophageal origin.

# **Accuracy of Diagnosis**

It is important that health care professionals, patients who are at risk and their families should be able to recognise characteristic symptoms that may be indicative of ACS. The signs and symptoms alone are neither sensitive nor specific<sup>2</sup>. (Class B;LOE IV). (See <u>Guideline 9.2.1</u> Recognition and First Aid Management of Heart Attack, Guideline 14.1 ACS: Presentation with ACS).

Distinguishing ischemic from oesophageal chest pain can be difficult on clinical grounds. Both ischemic cardiac chest pain and the pain associated with gastro oesophageal reflux can share very similar characteristics such as sense of dyspepsia and response to nitrates or antacid cocktail<sup>3 4</sup>.

The available evidence to support the use of a GI cocktail (oral viscous lignocaine/antacid/ +/- anticholinergic) compared with standard diagnostic protocols (Serial ECG and biomarkers and provocative testing or imaging) to improve accuracy of diagnosis is sparse and inconclusive<sup>1-14</sup>.

In patients with chest pain and suspected ACS, the use of a GI cocktail (oral viscous lignocaine/antacid/ +/- anticholinergic) compared with standard diagnostic protocols (Serial ECG

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and biomarkers and provocative testing or imaging) is not proven to improve the accuracy of diagnosis.

A number of these studies suggest a potential for harm in using antacid cocktail to improve the accuracy of diagnosis of ACS because myocardial ischaemia may be incorrectly excluded from the diagnosis<sup>4 7 9 11</sup>. A symptomatic response to a GI cocktail in proven ACS has been well documented.

The signs and symptoms alone should not be used without other data for making the diagnosis of ACS. (Class B;LOE IV) (See <u>Guideline 14.1</u>).

These symptoms cannot be used in isolation but may be useful when used in combination with other information such as biomarkers, risk factors, an ECG and other diagnostic tests, in making triage and some treatment decisions in the out of hospital and emergency department (ED) setting. (Guideline 14.1)

### Recommendation

It is recommended that the GI cocktail not be used in the emergency department to assist in the diagnosis of ACS.

## Level of Evidence

III Case series and observational studies

## Class of Recommendation

Class A - Recommended

# **Further Reading**

ANZCOR Guideline 9.2.1 Recognition and First Aid Management of Heart Attack

ANZCOR Guideline 14.1 ACS: Presentation with ACS

## References

- 1. Teece S, Crawford I. Towards evidence based emergency medicine: best BETs from the Manchester Royal Infirmary. Antacids and diagnosis in patients with atypical chest pain. *Emerg Med J* 2003;20(2):170-1.
- 2. Goodacre SW, Angelini K, Arnold J, Revill S, Morris F. Clinical predictors of acute coronary syndromes in patients with undifferentiated chest pain. *QJM* 2003;96(12):893-8.
- 3. Schultz T, Mannheimer C, Dellborg M, Pilhall M, Borjesson M. High prevalence of gastroesophageal reflux in patients with clinical unstable angina and known coronary artery disease. *Acute Card Care* 2008;10(1):37-42.
- 4. Henderson RD, Wigle ED, Sample K, Marryatt G. Atypical chest pain of cardiac and esophageal origin. *Chest* 1978;73(1):24-7.
- 5. Bennett JR, Atkinson M. The differentiation between oesophageal and cardiac pain. *Lancet* 1966;2(7473):1123-27.
- 6. Berman DA, Porter RS, Graber M. The GI Cocktail is no more effective than plain liquid antacid: a randomized, double blind clinical trial. *J Emerg Med* 2003;25(3):239-44.
- 7. Dickinson MW. The "GI Cocktail" in the evaluation of chest pain in the emergency department. *J Emerg Med* 1996;14(2):245-6.
- 8. Friday Jr AD. Xylocaine visous for diagnosis of chest pain. JACEP 1977;6(5):224.
- 9. Guda NM, Prasad GA, Affi A, Truppe RE, Puetz T. Utility of GI cocktail in an emergency room setting. *Gastroenterology* 2000;118(4, Part 1):A459.
- 10. Schwartz GR. Xylocaine viscous as an aid in the differential diagnosis of chest pain. *J Am Coll Emerg Phys* 1976;5(12):981-3.
- 11. Servi RJ, Skiendzielewski JJ. Relief of myocardial ischemia pain with a gastrointestinal cocktail. *Am J Emerg Med* 1985;3(3):208-9.
- 12. Wrenn K, Slovis CM, Gongaware J. Using the "GI cocktail": a descriptive study. *Ann Emerg Med* 1995;26(6):687-90.
- 13. Simpson FG, Kay J, Aber CP. Chest pain--indigestion or impending heart attack? *Postgrad Med J* 1984;60(703):338-40.
- 14. Davies HA, Page Z, Rush EM, Brown AL, Lewis MJ, Petch MC. Oesophageal stimulation lowers exertional angina threshold. *Lancet* 1985;1(8436):1011-4.