INTRODUCTION

- Serum pro-BNP (BNP) is increasingly being used for evaluation of patients with dyspnoea and LV dysfunction (titrate to severity and response to treatment).
- An elevated BNP level may be associated with LV dysfunction, and a normal BNP level in the setting of dyspnoea may rule out a cardiac cause immediately.
- This result may affect the management of patients referred for evaluation of dyspnoea.
- We can also determine response of patients with LV dysfunction to treatment based on their BNP levels.
- Presently, this test does not attract a Medicare rebate.
- This limits the widespread availability of BNP testing.
- The BNP test is also available as a point-of-care test (using finger-prick) that can be performed in the doctor’s surgery.

AIMS

- Determine the utility of this test in managing patients who present with dyspnoea and LV dysfunction.
- Identify issues relating to the use of the machine reader in the outpatient/office setting.

METHOD

- A Point-of-Care Roche machine reader and reader strips for serum pro-BNP, was donated to the practice for the duration of the study.
- No financial arrangements were entered into during or after the study.
- There were 2 (1.6%) failed results (reasons unknown).
- Of 127 patients, 45 were on Carvedilol at initial test, 13 (29%) had dose changed after test.
- Of 82 patients not on Carvedilol therapy, 12 (15%) were started on this after the test.
- Of the 82 patients not on Carvedilol therapy, 12 (15%) were started on this after the test.

RESULTS

- In 6 months between Oct 2005 to Apr 2006, 127 patients were tested.
- There were 2 (1.6%) failed results – reader returned an error message.
- Total = 127 patients, Males = 80 (~74 years), Females = 47 (~76 years).
- Range of reading 60 – 3000 pg/ml (NOTE: 3000 = maximum reading).
- Of 127 patients, 45 were on Carvedilol at initial test, 13 (29%) had dose changed after test.
- Of 82 patients not on Carvedilol therapy, 12 (15%) were started on this after the test.

DISCUSSION

- Of 127 patients, 45 were on Carvedilol at initial test, 13 (29%) had dose changed after test.
- Of 82 patients not on Carvedilol therapy, 12 (15%) were started on this after the test.
- Of 49 patients who had baseline BNP pre-CHF Rx, 14 (29%) had change/initiation of Rx.
- Of 43 patients having evaluation of dyspnoea, 8 (19%) had change in Rx after test.
- Of 127 patients, 45 were on Carvedilol at initial test, 13 (29%) had dose changed after test.
- Of the 35 patients having evaluation of dyspnoea, 23 (66%) had a reading of < 900 pg/ml and all of these patients had LVEF > 40%. Availability of BNP for this indication was most helpful.

CONCLUSIONS

- The point-of-care BNP test is very easy to perform in the surgery/office.
- In our office, the practice nurse does it while the patient is performing an ECG.
- The result is available within the time of consultation (12 minutes) and Rx can be tailored.
- Shortness of breath + normal BNP range can rapidly rule out LV dysfunction as a cause.
- There is correlation between increased levels of BNP and symptoms/degree of LV dysfunction, but this may differ from individual to individual.
- The baseline BNP for a CHF patient is highly individualised and baseline levels are very important to guide effectiveness of future therapy.
- Absolute BNP values may be misleading in some patients with no symptoms, we have seen very low values (i.e. 60 pg/ml) in patients with severe CHF with baseline BNP > 3000, as subsequent readings may be just as high.
- There were also 2 result failures (reasons unknown).
- Absolute BNP values may be misleading in some patients with no symptoms, we have seen very low values (i.e. 60 pg/ml) in patients with severe but well-controlled CHF.
- Of 127 patients, 45 were on Carvedilol at initial test, 13 (29%) had dose changed after test.
- Of 82 patients not on Carvedilol therapy, 12 (15%) were started on this after the test.
- Of 43 patients having evaluation of dyspnoea, 8 (19%) had change in Rx after test.

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