Audit of Hypertension and medication therapy in Aboriginal patients in the Goldfields in Western Australia

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Bega Garnbirrungu Health Service

- Provides holistic method and culturally appropriate health care service to Aboriginal people of the Goldfields
- Provides health services, health promotion, health education
- Estimated 11000-12000 patients registered

www.bega.org.au
Background – what we know about cardiovascular disease in Aboriginal patients in Australia

• Cardiovascular disease, including hypertension, is responsible for much of the reduced life expectancy of Aboriginal and Torres Strait Islander people

• Hypertension is an important causative factor in cardiovascular disease
Background - Hypertension in Aboriginal patients

• Data on prevalence of hypertension in Aboriginal patients is limited

• 2004-2005 National Aboriginal and Torres Strait Islander Health Survey (NATSIHS) collected information from 10439 patients of all ages
  - 14 per cent Aboriginal males and 16 per cent of Aboriginal females reported high blood pressure or hypertension compared to 10 percent of non-Aboriginal males and females
Background – Hypertension in Aboriginal patients

• Amongst patients aged 55 years and over 39 per cent of Aboriginal males and 46 per cent of Aboriginal females reported high blood pressure or hypertension compared to 32 per cent of non-Aboriginal males and 36 per cent of non – Aboriginal females

• The prevalence of hypertension was higher among Aboriginal patients in remote areas (10 per cent for males and females) than among Aboriginal patients in non-remote areas (6 per cent for males and 7 per cent for females)
Current recommendations concerning use of antihypertensive medications in Aboriginal patients

- Early treatment with antihypertensive medication is recommended for Aboriginal patients with hypertension. Current recommendations
  - All Aboriginal patients when BP > 140/90
  - All Aboriginal patients with diabetes when BP > 130/80

Ref: Australian Prescriber 2010
Current recommendations concerning use of antihypertensive medications in Aboriginal patients

• While the first choice of drug depends on comorbidities and contraindications, given the high prevalence of diabetes mellitus, an angiotensin converting enzyme (ACE inhibitor) or ANG II receptor antagonist is recommended
Cardiovascular Disease in Aboriginal Patients and Lipid Therapy

- Dyslipidaemia is known to accelerate atherosclerosis and CVD development
- Study - Aboriginal people in Central Australia have a propensity for atherosclerosis, owing to an atherogenic lipid profile with low - HDL and small - LDL particle size
Cardiovascular Disease In Aboriginal Patients and Lipid Therapy

• In view of increase in CV disease in Aboriginal patients lipid lowering drugs are available through PBS at lower thresholds than for non-Aboriginal patients
  - at any lipid level for patients with diabetes mellitus
  - if LDL cholesterol level remains above 2.5mmol/l after lifestyle modification

• S100 pharmaceutical scheme and Close The Gap allows Aboriginal patients to access these medications at no cost
Methods

• A retrospective audit of Aboriginal patients with clinical diagnosis of hypertension and on prescribed antihypertensive medications was performed at Bega Garnbirrungu

• 100 patients selected out of approximately 250 patients with a diagnosis of hypertension and currently prescribed anti-hypertensive medications
Audit - exclusions

- Patients who were not seen in clinic for more than 3 years were excluded
- Out of a population of approximately 250 patients with hypertension 10 patients were not taking antihypertensive medications. These patients were managed with dietary and exercise advice
Aims of Audit Study

• Look at types of antihypertensive medications used and use of multiple antihypertensive medications
• Look at whether patients with hypertension and antihypertensive medications were being reviewed – Parameter used was review by GP or physician within previous 6 months of audit
• Look at the prevalence of diabetes mellitus
• Look at use of lipid therapy in these patients with reference to current recommendations
Audit Results

- 52 per cent were taking a single antihypertensive medications
- 38 per cent were taking 2 different antihypertensive medications
- 10 per cent were taking 3 different antihypertensive medications
Anti-hypertensive medications

- One medication
- Two medications
- Three medications
Use of antihypertensive medications

• Of patients taking one antihypertensive medication (52 patients)
  - 32 taking either ACE inhibitor or ANG II receptor antagonist
    - 10 taking combination ACE inhibitor/diuretic combination or ANG II antagonist/ diuretic
  - 7 taking beta-blocker
  - 3 taking calcium antagonist
RESULTS

- Of patients taking 2 antihypertensive medications (38 patients)
  - Majority (30) taking combination of ACE inhibitor or ANG II receptor antagonist and calcium blocker vasodilator (eg. Irbersartan and Amlodipine)
RESULTS

• Of patients taking 3 anti-hypertensive medications (12 patients)
• Majority (8 patients) were taking combination of ACE inhibitor or ANG II receptor antagonist, calcium channel blocker and beta blocker eg coversyl, amlodipine, atenolol
Hypertension and Diabetes Mellitus

Of 100 patients in this audit of patients, 68 per cent also had diagnosis of diabetes mellitus.
Audit – Use of Lipid Therapy

• Of 100 patients with hypertension in this audit 82 per cent were taking lipid therapy
• Of those patients with hypertension and diabetes mellitus (68 patients) 95 per cent were taking lipid therapy
Audit – Use of Lipid therapy

• Lipid therapy
  - 80 per cent taking atorvastatin
  - 12 per cent taking gemfibrozil
  - 5 per cent taking both atorvastatin and gemfibrozil
Audit

• With regard to the most recent review by clinician (general practitioner or physician) 29 out of total of 38 patients (76 per cent) taking 2 antihypertensive medications were reviewed by a clinician in 6 months prior to audit (either GP or physician).

• With regard to patients taking 3 antihypertensive medications the majority (10 out of 12) had been reviewed by a physician in 6 months prior to this audit.
Summary of Audit

• This audit of patients with hypertension and hypertensive medications showed a significant proportion of patients were taking 2 or 3 antihypertensive medications (48 per cent).

• The majority of patients with hypertension were being reviewed within last 6 months of this audit by either general practitioner or physician.
Summary of Audit

• There was good adherence with current guidelines concerning the use of lipid therapy
• A significant proportion of patients with hypertension are returning for review
Limitations of this audit

• By definition this audit looked at Aboriginal patients with diagnosis of hypertension who were taking antihypertensive medications

• Hypertensive medications may not be appropriate for all patients with hypertension
  - potential side–effects especially in more elderly patients (eg hypotension)
  - should be more emphasis on factors such as diet (especially reducing salt) and exercise
Limitations of Audit

• Looked at prescribing only (Quantitative approach)

• Qualitative approach looking at patients understanding of hypertension and role of medications would provide more useful information improving cardiovascular outcomes eg survey reasons why patients are returning for review and their experiences of their clinical care
Further questions concerning hypertension and Aboriginal patients

- Strong evidence that reducing both salt intake and regular exercise reduces blood pressure patients in international studies (Cochrane database)
- Few studies looking at effectiveness of non-pharmacological approaches to managing cardiovascular disease in Aboriginal patients
Further questions concerning hypertension and Aboriginal patients

• Possible further study - Comparison of Aboriginal patients with mild hypertension to either trial of hypertensive medications or trial of prescribed exercise regime (clinical discretion in patients with significant cardiovascular disease)
Further questions concerning hypertension and Aboriginal patients

• How do we improve understanding of medications in patients with moderate to severe hypertension to reduce prevalence of cardiovascular disease?
Further questions concerning hypertension and Aboriginal patients

- If antihypertensive medications are warranted we can improve the understanding of these medications with culturally appropriate information leaflets
ACE INHIBITORS (eg: ramipril and perindopril)

Medicines for high blood pressure (hypertension)

My name:

My ACE inhibitor medicine is called:

Active ingredient

ACE inhibitors:
- lower blood pressure
- help to keep the heart and kidneys healthy
- are suitable for people who are diabetic

Women need to tell their doctor if they are:
- planning a baby
- pregnant
- breastfeeding

as ACE Inhibitors may not be suitable

Some medicines should NOT be taken with an ACE inhibitor
- ibuprofen (like Nurofen®) and some other medicines.

Always tell your Aboriginal Health Worker, nurse, doctor and pharmacist about all the medicines you are taking, even if you buy the medicine yourself at the supermarket or store.
Bega Garnbirrunyu
Cardiovascular Health Approaches

- Recall systems in place for chronic diseases
- Clinics for assisting patients to reduce and cease cigarette smoking
- Exercise programmes for patients and staff
- Food vouchers ($50 dollars) for fresh groceries or meat packs when clients attend for a comprehensive Health Check
- General Practice Clinics and Physician Clinics
Bega Garnbirrungu Health Service

• Management of patients very much TEAM approach
  - Aboriginal Health Workers
  - Reception Staff
  - Local Pharmacies (assist in training)
  - Medical Practitioners/ Physicians
  - Management/ Finance Dept.