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INTRODUCTION:

In the acute hospital setting, completion of a DNACPR form and referral to palliative care services implies that the patient is unlikely to survive a resuscitation attempt due to irreversible, active progressive disease.

Many of these patients have been prescribed medication for primary and secondary disease prevention previously, which continues on admission to hospital. Primary prevention is defined as "prevention of disease by altering susceptibility or reducing exposure for individuals at risk" and secondary prevention as "the early detection and treatment of disease to prevent progression".

Such medications may become redundant and are potentially burdensome to patients as they reach the end of life^{1, 2, 3}. In addition, the related financial implications should be considered².

Review of the NICE and SIGN guidelines^{4, 5} revealed no evidence of current guidance on review and withdrawal of primary and secondary preventative medication in terminal illness.

This audit aimed to establish the extent, rationale, and financial costs of prescription of cardiac medications, anticoagulants and statins for terminally ill patients in an acute hospital.

METHOD:

A prospective audit of 50 consecutive patients referred to the hospital palliative care team at the Royal Infirmary of Edinburgh was undertaken. Documentation was made of all primary and secondary preventative drugs, their cost and the reason for continuing or discontinuing them. The audit was conducted according to BMJ guidance⁶.

The agreed standard was that 100% of patients with irreversible, active progressive disease and a DNACPR form should have medications for primary and secondary prevention reviewed and the rationale for continuing or discontinuing a medication should be documented.

RESULTS:

Demographics

The sample of 50 patients comprised 60% males, 40% females with an average age of 73.5 years (range 58 to 89 years). Most (58%) of the patients had a malignant diagnosis, the remainder had end stage non-malignant disease.

Medications

Cardiac medications were prescribed to 44% (n=22) of the patients. See Figure 1

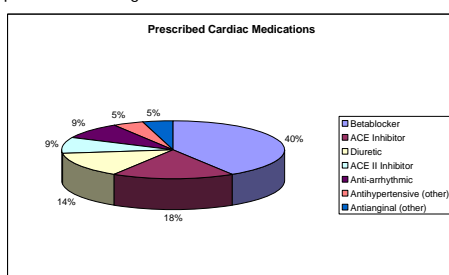


Figure 1

Anticoagulants were also prescribed to 44% (n=22) of the patients. Of these, 95.5% were low molecular weight heparins (91% of which were for prophylaxis) and the remainder warfarin. Statins were prescribed to 24% (n=12) of the patients.

Rationale

The rationale for continuing these medications in patients with a limited prognosis was rarely documented: only 2 of the patients on cardiac medications and 2 patients receiving therapeutic anticoagulation. No documentation was found relating to continuing prescriptions of statins. Where rationale was documented, the palliative care team agreed with it. However, in the majority of cases, the palliative care team would have stopped the medications for primary and secondary prevention. See Figure 2

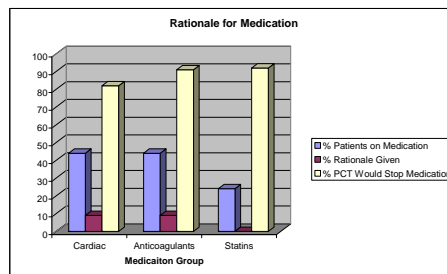


Figure 2

Costs

The financial costs of prescribing these medications were calculated according to average cost per patient per month. See Figure 3.

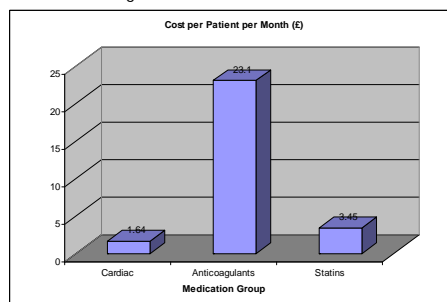


Figure 3

The total cost of the medications prescribed to the 50 audited patients for one month was also determined. See Figure 4.

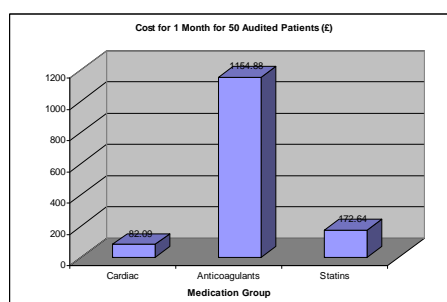


Figure 4

DISCUSSION:

These patients had advanced disease but the rationale for continuing primary and secondary preventative medications was documented in only 4 cases amongst the 50 patients audited.

Without documentation, it remains unclear as to whether the medications were continued because their risks and benefits had not been reassessed once the DNACPR form had been completed, or whether professionals preferred not to discuss discontinuing these medications with their patients. Alternatively, the patients may have not been receptive to discontinuing their medications following a discussion.

In the majority of cases the palliative care team did not agree with the continuation of medication due to the related burdens in a population of patients who will no longer benefit from their longer-term protection. These burdens include side effects as well as difficulties in swallowing medicines. Additionally, continuing these medications may be inconsistent with the goals of care, potentially giving mixed messages to the patient, relatives and professionals involved.

The costs of the cardiac, anticoagulant and statin medications were also calculated and found to total £1409 for 1 month for the 50 patients. Notably, the use of anticoagulant prophylaxis contributed significantly to the cost. This is not an insignificant figure when extrapolated to the entire population of patients reaching the end of life.

When a DNACPR order is completed, this should prompt a review of care goals and treatments. Primary and secondary preventative medications should be carefully considered and their requirement reviewed.

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