

Audit on Beta-Blocker eye-drops for Glaucoma patients with co-morbidities contraindicating their use

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Aim

To assess and ensure compliance with national guidelines regarding prescription of beta-blocker eye-drops for treatment of glaucoma to patients with co-morbidities.

Guidelines

The British National Formulary (BNF) states that "...eye drops containing a beta-blocker are contra-indicated in patients with bradycardia, heart block, or uncontrolled heart failure"¹, and "the Committee on Safety of Medicines (CSM) has advised that beta-blockers, even those with apparent cardioselectivity, should not be used in patients with asthma or a history of obstructive airways disease, unless no alternative treatment is available. In such cases the risk of inducing bronchospasm should be appreciated and appropriate precautions taken."¹

Rationale

Ophthalmology is a very specialized field where patients rely almost completely on the input of a specialist to manage their chronic eye problems such as glaucoma. If not regularly updated by the GP, ophthalmologists might not have an up-to-date list of a patient's other illnesses. New co-morbidities may arise after the start of glaucoma treatment.

Ophthalmologists review stable patients on a 6 monthly or yearly basis, and GPs are not always confident dealing with chronic eye conditions due to lack of resources.

Methodology

All glaucoma patients registered at a GP surgery were included. The ones who suffer also from asthma, COPD, heart block and heart failure were identified. Any of those patients who

had been prescribed beta-blocker drops for treatment of glaucoma were identified.

The retrospective audit was done on one day at a dispensing GP practice. Staff comprises two senior GPs, two trainees, two permanent pharmacy technicians, two nurses and three receptionists. There were 4,320 patients registered at the Surgery on the date when the audit was run. Data were collected using the search function built into the EMIS medical information system. Clinical codes were used in the search to identify relevant patients. For some patients medical notes were read to identify whether patients with heart failure were stable or uncontrolled.

Results

There are 62 patients known to have glaucoma or suspected glaucoma/ocular hypertension. Of these, 40 patients (64.52%) are being treated and 22 (35.48%) are not on active treatment but simply monitored. None of the patients was on oral treatment (Diamox). Out of the patients on treatment (n=40), three (7.50%) were on beta-blocker only drops, 27 (67.50%) were on drops without beta-blockers and ten (25.00%) were on combined therapy.

Out of the glaucoma patients (n=62), nine (14.52%) had asthma, three (4.84%) had COPD and three (4.84%) had heart failure. No glaucoma patients were found to have heart block or bradycardia.

Two glaucoma patients - one suffering from asthma and one with heart failure were on beta-blocker-containing eye drops. When reading the medical notes, it was found that the patient with asthma had this diagnosis ruled out some years ago, as requested by the ophthalmologist managing his glaucoma, but the clinical coding in his notes was not amended. The patient with

heart failure was stable and does not fit into the “uncontrolled heart failure” mentioned in the guidelines, but the patient’s progress nonetheless needs to be monitored.

Discussion

Although there was one patient whose notes were not completely correct, there was 100% compliance with the BNF guidelines. These findings may have implications on how GPs look at keeping their patients active problem list up-to-date and accurate. This is mostly important for patients with multiple co-morbidities on different types of medications. The EMIS system has a function where upon adding a new drug onto a patient’s medication list, it would bring up an alert message if the added medication interacts with any of the other prescribed drugs. If it is possible, it would be helpful if this function could be linked to the clinical codes of the active problems list where a similar message could warn regarding relevant side effects.

Reference

1. BNF 57 March 2009, 11.6 Treatment of Glaucoma – Beta Blockers [online]. Available at: <http://www.bnf.org/bnf/bnf/57/5507.htm>

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