

Concomitant Use of Low Dose Aspirin and Non-steroidal Anti-inflammatory Drugs in Elderly Nursing Home Residents

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Purpose

Since cardiovascular disease, stroke and pain are all common conditions in the elderly, there is increased likelihood this population could receive low-dose aspirin (LDA) for cardiovascular disease or stroke prevention in conjunction with a non-steroidal anti-inflammatory drug (NSAID) for arthritis or another pain-related condition. This is important because concomitant use of aspirin (ASA) and some NSAIDs can, under certain circumstances, render ASA less effective when used for cardio-protection and stroke prevention. Furthermore, co-administration of these agents can also increase the risk of peptic ulcer disease. The objective of this research was to assess the concomitant use of NSAIDs in residents receiving LDA.

Method

This was a retrospective cohort study and included residents from a single long-term care facility in New Jersey who received LDA during an eighteen month period (January 1, 2008 to June 30, 2009). The facility Meditech computer system was used as the data source for this project. Information, including resident demographics, co-morbidities, LDA and pertinent concomitant medication was collected by pharmacy students using paper data collection forms. Subjects not receiving LDA or those with incomplete records including no LDA dose, multiple doses or daily doses of ASA exceeding 325mg were excluded. Therapeutic drug classes were recorded rather than specific agents within each class. Data and statistical analysis was conducted using Microsoft Access to determine mean values and standard deviations for all continuous demographic and clinical variables, as well as percentages for all categorical variables.

Results

There were 218 data collection forms included in the analysis. The mean age of the residents was 83 years-old, most were female (68%) and dually eligible - Medicare and Medicaid (41%) or Medicare Part D (32%). Coronary heart disease and coronary artery disease were the most common indications for the use of LDA. Overall, the mean ASA dose was 136.6 ± 97.4 (81-325) mg. Seventy-two percent (157/218) of residents were prescribed a dose of 81mg and 28% (61/218) received a dose higher than 81mg (but less than or equal to 325mg). Twenty residents (9.2%) received NSAIDs during the study period, half of which (4.6%) were prescribed a non-selective NSAID. An analysis of dosing schedules in residents who received both LDA and non-selective NSAIDs revealed these agents were likely to be administered together (at 9:00 AM) or within a short window of one another in all subjects. Use of anti-platelet agents or anticoagulants with LDA occurred in 60% and 50% of residents who received traditional NSAIDs and COX-2 inhibitors, respectively. Overall, 80.3% (175/218) of study subjects received at least one GI agent during the study period. PPIs (73.4%) were most frequently prescribed, followed by H2-antagonists (10.1%), antacids (6.0%), and sucralfate (1.8%).

Conclusions

Approximately 5% of elderly nursing home residents who received LDA were likely to be prescribed a non-selective NSAID. An analysis of dosing schedules revealed these agents were likely to be administered at the same time, which could potentially negate the cardio-protective benefits of LDA. Therefore, until additional information is available, the FDA recommends that ibuprofen (and possibly

other non-selective NSAIDs) be administered at least 30 minutes after or 8 hours before LDA. Additionally, prescribing analgesics that do not interfere with the anti-platelet effect of LDA for populations at high risk for cardiovascular events is also advised.