

Iron deficiency anaemia and aspirin use in old age

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SUMMARY

Aspirin is being increasingly prescribed for cardiovascular protection, but is also recognized to have significant gastrointestinal side-effects. Whether chronic aspirin consumption causes iron deficiency is undetermined, and there is little information available regarding iron deficiency and aspirin use in old age. We studied the relationship between iron deficiency anaemia and regular aspirin prescription in old age.

Keywords: aspirin; iron deficiency; cardiovascular disease; gastrointestinal problems.

Introduction

IRON deficiency anaemia is an important diagnosis to make in old age. Studies have emphasized the high prevalence of structural causes, particularly the importance of excluding colonic cancer.^{1,2} The role of aspirin as an aetiological factor for chronic iron deficiency anaemia is much less well defined. Aspirin is known to have significant gastrointestinal toxicity,³ yet Hawkey states in a recent review that there is little clear evidence as to whether chronic aspirin consumption causes iron deficiency anaemia.⁴

We studied the relationship between iron deficiency anaemia and regular aspirin prescription in old age.

Method

One hundred and twelve elderly patients consecutively referred for investigation of proven iron deficiency anaemia were studied retrospectively. Diagnosis of iron deficiency anaemia was based on reduced haemoglobin with a low mean cell volume, confirmed by reduced ferritin in 81 out of 112 patients (72%), or an appropriate response to iron therapy.

All patients underwent a gastroduodenoscopy and rigid sigmoidoscopy. Ninety-nine out of 112 patients (88%) also had a double contrast barium enema and, overall, 16 patients (14%) had a colonoscopy or flexible sigmoidoscopy.

In the second part of the study the prescribing database of each of eight local primary care practices in the same catchment area was analysed for aspirin prescribing for all patients on the database aged 75 years or older. Of these, 6288 patients aged 75 years or older were identified together with all their regular prescriptions.

Results

The mean age of the patients for investigation of iron deficiency anaemia was 81 years. Overall, a positive medical diagnosis as to the cause of the anaemia was made in 53 out of 112 patients (47%). This comprised 23 patients with cancer — 11 colonic, 10 gastric, and two other — six with malabsorption, five with peptic

ulcers, 10 with severe oesophagitis or duodenitis, three with colonic polyp, two with colitis, three with angiodysplasia, and one with oesophageal varices.

Fifty-nine out of 112 patients (53%) had no definite medical diagnosis. However, 11 of these 59 (19%) had moderate or severe diverticulosis. Overall, 24 of the 59 (41%) with no definite medical diagnosis were being treated with aspirin. In the whole group of 112 patients, 27 (24%) were being treated with aspirin. Only one out of the 24 carcinoma patients (4%), compared with 26 out of the 89 non-carcinoma patients (29%), was being treated with aspirin.

The mean age of the patients studied in the primary care group was 82 years. Seven hundred and one out of the 6268 primary care patients (11%) were using regular aspirin prescribed by their primary care physicians. When comparing the primary care population with the iron deficiency population for aspirin usage, chi-squared equals 18.2 (df = 1; $P < 0.001$; OR = 2.16; 95% CI = 1.54–3.02).

Discussion

This study emphasizes the importance of thorough investigation of iron deficiency anaemia in extreme old age. Recent studies from the United States of America, Australia, and England^{1,2} suggest that the detection rate for lesions capable of causing blood loss are between 50% and 70%, although the mean ages in these studies were 60 and 70 years respectively.

Our experience suggests that thorough investigation is appropriate at almost any age, and reinforces the clinical significance of a recently published audit which suggested that, in a high percentage of cases, iron deficiency anaemia is inadequately investigated in the United Kingdom.⁵

A key finding of our study was the high percentage of patients with iron deficiency anaemia who were also on a regular aspirin prescription. In the whole group, 24% were being treated with aspirin, and this figure is statistically significant when compared with 11% for the prevalence of all primary care patients in the same catchment area who received a regular aspirin prescription. However, without a formal case control study these findings must be considered preliminary. Yet the patients with iron deficiency were drawn from the same population, with the same mean age as those in primary care. Also, over the same period of time as the patients with iron deficiency were being studied, a parallel study of community medication usage by inpatients in the same catchment area was being undertaken. This study identified only 2.2% of local elderly people taking aspirin on a regular basis without a general practitioner prescription.⁶ Another community study in London found that 4.6% of patients with ischaemic heart disease bought their aspirin over the counter.⁷

In summary, we have provided preliminary evidence that regular aspirin prescriptions are a contributory cause to iron deficiency anaemia in the very elderly. As regular aspirin prescribing continues to increase, more patients will be seen with iron deficiency anaemia. However, without proper and thorough investigation of the upper and lower gastrointestinal tract, the regular use of aspirin cannot be assumed to be the cause.

References

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