ASPIRIN MISUSE AT HOME ACCORDING TO START AND STOPP IN FRAIL OLDER PERSONS

- O. Dalleur 1,4, B. Boland 2,3, A. Spinewine 4-5
- 1 Pharmacy and 2 Geriatric Medicine, St-Luc University Hospital,
- 3 Institute of Health and Society, 4 Louvain Drug Research Institute, 5 CHU Mont-Godinne;
- UCLouvain, Belgium
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INTRODUCTION

- Inappropriate prescribing in geriatric patients:

  « Under »  
  « Mis »
  « Over »

  « Prescribing »

Tools to detect inappropriate prescription in elderly: Beers, IPET, Laroche, & STOPP-START, ...
INTRODUCTION

STOPP (Screening Tool of Older Person’s Prescriptions) and START (Screening Tool to Alert doctors to Right Treatment). Consensus validation

P. Gallagher¹, C. Ryan², S. Byrne², J. Kennedy² and D. O’Mahony³

- European, 2008
- Consensus opinion of a panel of experts in geriatric medicine, clinical pharmacology, psychiatry of old age, pharmacy and general practice

- **STOPP**: 65 situations « at risk » linked with 29 drugs
- **START**: 22 situations « at risk » linked with 15 drugs

**ASPIRIN IN STOPP**

<table>
<thead>
<tr>
<th>STOPP: 6/65</th>
<th>Cardiovascular system</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. in combination with <strong>warfarin</strong> without anti-H2 or PPI.</td>
<td></td>
</tr>
<tr>
<td>2. with a past history of <strong>peptic ulcer</strong> disease without anti-H2 or PPI.</td>
<td></td>
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<tr>
<td>3. dose &gt; <strong>150</strong> mg/day</td>
<td></td>
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<tr>
<td>4. with <strong>no history</strong> of coronary, cerebral or peripheral vascular symptoms or occlusive event.</td>
<td></td>
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<tr>
<td>5. to treat <strong>dizziness</strong> not clearly attributable to cerebrovascular disease.</td>
<td></td>
</tr>
<tr>
<td>6. with concurrent <strong>bleeding</strong> disorder.</td>
<td></td>
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</table>
# ASPIRIN IN START

<table>
<thead>
<tr>
<th>START: 3/22</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cardiovascular system</td>
</tr>
</tbody>
</table>

1. **chronic atrial fibrillation**, where warfarin is contraindicated, but not aspirin.

2. with a documented **history** of atherosclerotic coronary, cerebral or peripheral vascular disease in patients with sinus rhythm.

<table>
<thead>
<tr>
<th>Endocrine system</th>
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</thead>
</table>

3. **diabetes** mellitus with coexisting major cardiovascular risk factors (hypertension, hypercholesterolemia, smoking history).

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## WHAT ABOUT ASPIRIN USE?

- **Aspirin**

  ![Aspirin molecule](image)

  Our patients in 1930

  ![Aspirin advertisement and baby](image)
PURPOSE

The aim of this study is to describe aspirin misuse and related hospital admissions according to START and STOPP criteria in frail older patients.

METHODS

- **Design**: cross-sectional study in a teaching hospital in Brussels
- **Eligibility**:
  - age ≥ 75 years
  - acute hospital admission (not in a geriatric unit) in 2008
  - frailty score ISAR ≥ 2/6
  - CGA by the geriatric liaison team
- **Data collection**
  - **geriatric**: social, functional/cognitive status, nutritional
  - **medical**:
    - detailed medical history/comorbidities (including GFR)
    - drug list at home
    - main reason for admission
METHODS

• End points
  – Inappropriate prescribing events (IP) related to aspirin at home (according to STOPP&START)
    IP detection by a clinical pharmacist and a geriatrician; using the list of drugs taken at home and comorbidities.
    Sub-analysis of the IP related to aspirin.

  – Hospital admissions related to inappropriate prescribing of aspirin
    Determination of relation between hospital admission and IP based on clinical judgement.

RESULTS

POPULATION CHARACTERISTICS

302 frail older people
Age 84 years ± 5; ♀ 63 %
ISAR score : 2 - 6 / 6 ; average 3,5 ± 1
134 prescriptions of aspirin / 302 = 44%

Geriatric Syndromes
- falls (58 %),
- malnutrition (30 %),
- cognitive decline (25%),
- depression (25 %)

Co-morbidities
- hypertension (55 %),
- ischemic CV diseases (40 %),
- osteoporosis (26 %),
- atrial fibrillation (25%),
- diabetes (23 %),
- COPD (15 %)
DRUGS BEFORE ADMISSION

Drugs:
- 6±3 drugs/patient
- ≥ 5 drugs/day: 75%

210 STOPP-IP events
in 144 patients (144/302): 48%

Aspirin STOPP-IP events:
- 35/210 (17%)
- Prevalence in patients = 12%

ASPIRIN MISUSE

<table>
<thead>
<tr>
<th>Criteria</th>
<th>N</th>
<th>(%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt; 150 mg/day</td>
<td>25</td>
<td>(71%)*</td>
</tr>
<tr>
<td>with no history of coronary, cerebral or peripheral vascular symptoms or occlusive event</td>
<td>7</td>
<td>(20%)</td>
</tr>
<tr>
<td>past history of peptic ulcer disease without gastric protection</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>combination with warfarin without gastric protection</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>to treat dizziness not clearly attributable to cerebrovascular disease</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

*aspirin 160mg frequently prescribed in B
HOSPITAL ADMISSIONS

- 82 of the 302 hospital admissions (27%) related to IP
  - STOPP-IP n=54
  - START-IP n=38
  - Both present = 10 cases

Aspirin misuse may have contributed in 8/82 (10%)

2 admissions for hemorrhagic problems
  → aspirin overuse according to STOPP

6 admissions for myocardial infarction
  → aspirin underuse according to START (these patients required secondary cardiovascular prevention)

NB: relative reduction of risk for CV events with aspirin in high risk patient ~ 25%

CONCLUSIONS

1. Aspirin = most frequent Inappropriate Prescribing event:
   - STOPP-IP: prevalence = 12%
     → Primary prevention: STOP
   - START-IP: prevalence = 25%
     → Secondary prevention
     → Diabetes (with CV risk factor)

2. 1 acute hospital admission/4 was related to IP events
   - 1/10 in patient with aspirin misuse
CONCLUSIONS

⇒ Appropriate use of this old molecule is still a challenge in old patients.
⇒ Clinicians should remember when to consider aspirin and when to avoid it in frail older patients in order to prevent hospital admissions.

olivia.dalleur@uclouvain.be

ISAR IDENTIFICATION OF SENIORS AT RISK

• Six self-report questions
  – on functional dependence premorbid and acute change
  – recent hospitalization
  – impaired memory
  – impaired and vision
  – polymedication.

Return to the emergency department among elders: patterns and predictors.
McCusker J, Cardin S, Bellemare F, Belzile E.