

中文題目:心房顫動合併急性冠心症或經皮冠狀動脈介入治療患者其抗血栓藥物之處方形態分析

英文題目: Prescription pattern of antithrombotic agents in atrial fibrillation patients presenting with acute coronary syndrome or undergoing percutaneous coronary intervention

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**Background:** The optimal antithrombotic and antiplatelet treatment strategy is unresolved in atrial fibrillation (AF) patients with acute coronary syndrome (ACS) or stable coronary artery disease receiving coronary stenting. We aim to analyze prescription pattern of antithrombotic agents among these patients in Taiwan.

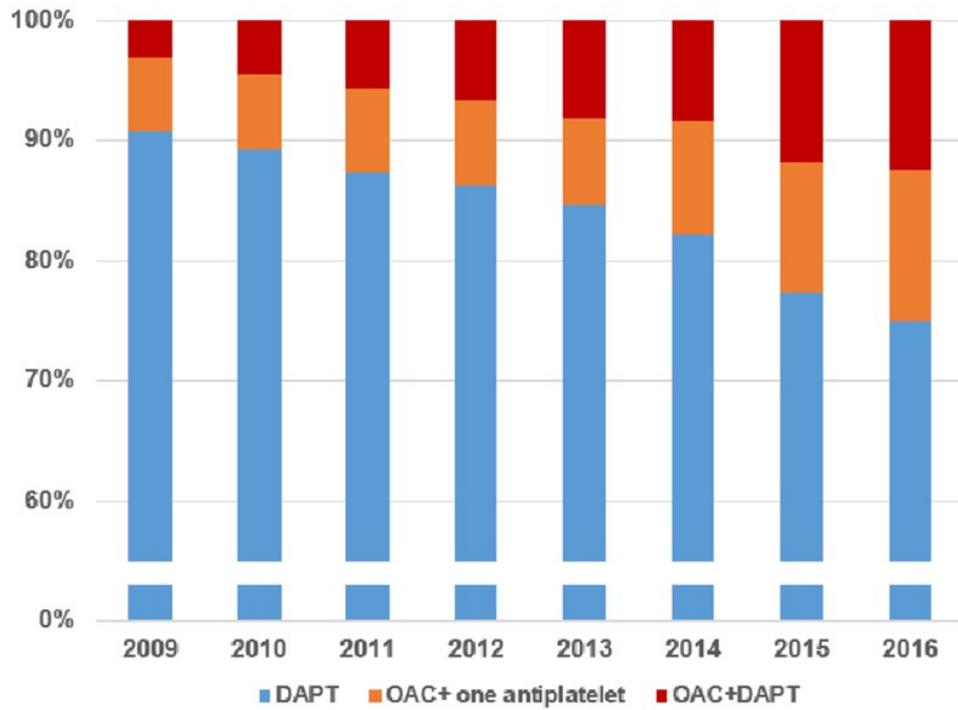
**Methods:** Patients (age $\geq$ 18 years) with non-valvular AF were identified by the presence of 2 outpatient claims or 1 in-patient claims with an International Classification of Diseases (ICD 9 or 10) code in the Taiwanese National Health Insurance claims database between Jan 1, 2009, and Dec 30, 2016. Patients with mitral stenosis or ones with previous valve surgery were excluded. In addition, we enrolled those non-valvular AF patients who had just experienced ACS or undergone percutaneous coronary intervention (PCI) with stent placement. Baseline characteristics were recorded and prescription of antithrombotic agents including dual antiplatelet therapy (DAPT), dual therapy (DT: single antiplatelet plus an oral anticoagulant), and triple therapy (TT: DAPT plus an oral anticoagulant) were analyzed.

**Result:** Of total 14627 patients were analyzed, the most commonly prescribed antithrombotic therapy was DAPT (56.3%), followed by single antiplatelet (SAPT)(28.5%), DT (5.9%), TT (5.6%), and a single oral anticoagulant (3.7%). Only patients with DAPT, TT, and DT were included in the analysis (9918 patients). The average age was  $71.3 \pm 11.1$  years, and 69.7% were male. There was a progressively increasing use of DT (6.2% to 12.6%) or TT (3.1% to 12.5%) from 2009 to 2016. In 2016, there were 25.0% patients were treated with oral anticoagulant-based therapy (Figure 1). Eighty-eight percent of the patients had a CHA<sub>2</sub>DS<sub>2</sub>-VASc score  $\geq 2$ , and the mean HAS-BLED score was  $2.3 \pm 0.7$ . TT patients tended to be younger, lower HAS-BLED score, and female dominant compared with DAPT and DT groups (Table 1).

**Conclusion:** In the study population, DAPT was the most commonly prescribed

regimen in the past years. Although oral anticoagulation-based therapy was increasingly used, it was still under-prescribed among these patients.

**Figure.1 Prescribing trend of anti-thrombotic therapy ( in percentage)**



**Table1. Baseline characteristics**

|  | Total         | DAPT          | OAC+ one<br>antiplatelet | OAC+DAPT      | p-value |
|--|---------------|---------------|--------------------------|---------------|---------|
| N  | 9918          | 8239 (83.07)  | 865 (8.72)               | 814 (8.21)    |         |
| ACS indication   | 5205 (52.48)  | 4332 (52.58)  | 507 (58.61)              | 366 (44.96)   | <0.01   |
| Stable CAD + PCI indication                                    | 4713 (47.52)  | 3907 (47.42)  | 358 (41.39)              | 448 (55.04)   |         |
| Sex  |               |               |                          |               | <0.01   |
| Male   | 6908 (69.65)  | 5706 (69.26)  | 593 (68.55)              | 609 (74.82)   |         |
| Female   | 3010 (30.35)  | 2533 (30.74)  | 272 (31.45)              | 205 (25.18)   |         |
| Age  | 71.33 (11.12) | 71.56 (11.16) | 71.17 (11.07)            | 69.16 (10.60) | <0.01   |
| Comorbidity  |               |               |                          |               |         |
| Pulmonary embolism   | 38 (0.38)     | 26 (0.32)     | 7 (0.81)                 | 5 (0.61)      | 0.04    |
| Deep vein thrombosis   | 72 (0.73)     | 51 (0.62)     | 11 (1.27)                | 10 (1.23)     | 0.02    |
| Malignancy   | 650 (6.55)    | 557 (6.76)    | 51 (5.90)                | 42 (5.16)     | 0.15    |
| Coronary artery disease  | 5633 (56.80)  | 4709 (57.15)  | 486 (56.18)              | 438 (53.81)   | 0.17    |
| PAD  | 590 (5.95)    | 486 (5.90)    | 57 (6.59)                | 47 (5.77)     | 0.70    |
| Heart failure  | 2916 (29.40)  | 2361 (28.66)  | 297 (34.34)              | 258 (31.70)   | <0.01   |
| Hypertension   | 7200 (72.60)  | 6003 (72.86)  | 608 (70.29)              | 589 (72.36)   | 0.27    |
| Diabetes mellitus  | 3917 (39.49)  | 3288 (39.91)  | 319 (36.88)              | 310 (38.08)   | 0.15    |
| Hyperlipidemia   | 3101 (31.27)  | 2571 (31.21)  | 266 (30.75)              | 264 (32.43)   | 0.73    |
| Peptic ulcers  | 1647 (16.61)  | 1346 (16.34)  | 172 (19.88)              | 129 (15.85)   | 0.02    |
| CKD  | 2024 (20.41)  | 1762 (21.39)  | 135 (15.61)              | 127 (15.60)   | <0.01   |
| Chronic lung disease   | 895 (9.02)    | 754 (9.15)    | 74 (8.55)                | 67 (8.23)     | 0.60    |
| Chronic liver disease  | 585 (5.90)    | 476 (5.78)    | 56 (6.47)                | 53 (6.51)     | 0.53    |
| HASBLED score  | 2.32 (0.74)   | 2.34 (0.74)   | 2.26 (0.76)              | 2.21 (0.71)   | <0.01   |
| CHA <sub>2</sub> DS <sub>2</sub> -VAS <sub>3</sub> score       | 3.04 (1.38)   | 3.06 (1.38)   | 3.05 (1.39)              | 2.85 (1.36)   | <0.01   |
| CHA <sub>2</sub> DS <sub>2</sub> -VAS <sub>3</sub> score group |               |               |                          |               | 0.01    |
| 0  | 219 (2.21)    | 178 (2.16)    | 24 (2.77)                | 17 (2.09)     |         |

|                              |              |              |             |             |       |
|------------------------------|--------------|--------------|-------------|-------------|-------|
| 1                            | 1176 (11.86) | 949 (11.52)  | 101 (11.68) | 126 (15.48) |       |
| 2                            | 2132 (21.50) | 1766 (21.43) | 170 (19.65) | 196 (24.08) |       |
| 3                            | 2667 (26.89) | 2220 (26.95) | 234 (27.05) | 213 (26.17) |       |
| 4                            | 2256 (22.75) | 1875 (22.76) | 213 (24.62) | 168 (20.64) |       |
| 5                            | 1147 (11.56) | 977 (11.86)  | 97 (11.21)  | 73 (8.97)   |       |
| 6-9                          | 321 (3.24)   | 274 (3.33)   | 26 (3.01)   | 21 (2.58)   |       |
| <b>Past history</b>          |              |              |             |             |       |
| AMI                          | 754 (7.60)   | 655 (7.95)   | 44 (5.09)   | 55 (6.76)   | 0.01  |
| Ischemic stroke              | 1298 (13.09) | 978 (11.87)  | 178 (20.58) | 142 (17.44) | <0.01 |
| GI bleeding                  | 1673 (16.87) | 1397 (16.96) | 149 (17.23) | 127 (15.60) | 0.59  |
| ICH                          | 112 (1.13)   | 91 (1.10)    | 12 (1.39)   | 9 (1.11)    | 0.75  |
| Other critical site bleeding | 360 (3.63)   | 294 (3.57)   | 33 (3.82)   | 33 (4.05)   | 0.74  |
| <b>Procedure</b>             |              |              |             |             |       |
| CABG                         | 65 (0.66)    | 35 (0.42)    | 30 (3.47)   | 0 (0.00)    | <0.01 |
| <b>Medication</b>            |              |              |             |             |       |
| ACEI/ARB                     | 4968 (50.09) | 4075 (49.46) | 445 (51.45) | 448 (55.04) | 0.01  |
| BB                           | 5142 (51.85) | 4209 (51.09) | 461 (53.29) | 472 (57.99) | <0.01 |
| Statin                       | 4593 (46.31) | 3840 (46.61) | 343 (39.65) | 410 (50.37) | <0.01 |
| NASIDs                       | 171 (1.72)   | 152 (1.84)   | 12 (1.39)   | 7 (0.86)    | 0.09  |