Objective: CHADS2 score can quantify risk of stroke for patients who have atrial fibrillation (AF) and may aid in selection of antithrombotic therapy. The aim of this study was to investigate the relationship between CHADS2 score and antithrombotic therapy in acute decompensated heart failure (ADHF) patients with AF. Methods: The ATTEND registry in an ongoing prospective observational multicenter cohort study of patients hospitalized for ADHF in Japan. We evaluated 1027 ADHF patients with AF admitted to 48 hospitals (mean age 74.8±11.5 year old, male 56.2%, LVEF 49.1±16.7%). We classified them in 6 groups according to CHADS2 score of 1 to 6 (score1: n=133, 2: n=279, 3: n=366, 4: n=132, 5: n=86, 6: n=31). Antithrombotic therapy was compared according to CHADS2 score. Results: As the CHADS2 score increased, the ratio of warfarin use was decreased (total: 77.0%, score1: 85.7%, 2: 83.5%, 3: 73.2%, 4: 78.0%, 5: 60.5%, 6: 67.7%, p<0.001). On the other hand, the ratio of aspirin use was increased (total: 35.3%, score1: 17.3%, 2: 27.6%, 3: 41.3%, 4: 43.2%, 5: 43.0%, 6: 58.1%, p<0.001). Conclusion: In ADHF patients with AF, the underuse of warfarin were observed at high CHADS2 score. Keywords: CHADS2 score, AF, warfarin