

# Il trattamento anticoagulante nei pazienti con fibrillazione atriale non valvolare e anemia cronica: ancora zone grigie

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Anemia has been associated with a higher risk of major bleeding among atrial fibrillation patients on oral anticoagulation and is therefore included in most bleeding risk scores. In contrast, much less evidence exists regarding the association between anemia and stroke risk in atrial fibrillation patients. The purpose of this review was to re-evaluate the efficacy and safety of anticoagulant treatment, in particular of new oral anticoagulants, in patients with non-valvular atrial fibrillation and chronic anemia. Five observational studies were found in the literature that specifically investigated this issue; the results can be synthesized as follows: (i) the progressive decrease in hemoglobin level was associated with an increased incidence of major hemorrhages, already evident in mild anemia and very high in more severe anemia (hemoglobin level  $<10$  g/dl), up to  $>10\%$  per year. In contrast, the association between anemia and stroke risk appears to be weak; (ii) warfarin seems to be effective in stroke prevention in patients with mild anemia, with a moderate increase in major hemorrhages, whereas it seems to be ineffective and associated with a high incidence of hemorrhagic complications in patients with more severe anemia; (iii) new oral anticoagulants, in particular apixaban, seem to induce a lower incidence of major hemorrhages in comparison with warfarin in patients with both mild and severe anemia. However, when hemoglobin level is  $<10$  g/dl, the incidence of major hemorrhages remains high, also in patients treated with the new anticoagulants. These data suggest that in patients with atrial fibrillation and mild anemia, anticoagulant treatment appears to be effective, but requires close monitoring during follow-up, whereas in patients with more severe anemia the choice of whether or not to prescribe an anticoagulant treatment should be made on a case by case basis, considering the thromboembolic risk, the etiology of chronic anemia and the history and general condition of the patient. New oral anticoagulants should be preferred to warfarin.

**Key words.** Anemia; Atrial fibrillation; New oral anticoagulants; Warfarin.