Jesu li bodovne procjene rizika ujedno i dobri prediktori progresije fibrilacije atrija

Predicting atrial fibrillation progression: risk scores and useful corrections

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Uvod: Procjena nastanka trajne fibrilacije atrija (FA) u bolesnika s paroksizmalnom ili kratkotrajnom perzistentnom FA je izazov. Postoje istraživanja o predviđanju nastanka perzistentne FA u bolesnika s paroksizmom FA, ali istraživanja o progresiji u trajnu FA su izuzetno rijetka.[1,2] Cilj ovog prospektivnog istraživanja je procijeniti korist rutinskih demografskih, kliničkih, laboratorijskih i ehokardiografskih parametara, uz već poznate bodovne procjene rizika (eng. *score*), u predviđanju nastanka trajne FA.

Metode: Tijekom 30 mjeseci uključili smo 409 bolesnika s paroksizmalnom i kratkotrajnom perzistentnom FA koji su liječeni u Kliničkoj bolnici Dubrava te su praćeni 21 mjesec (medijan). Prikupili smo kliničke, laboratorijske i uobičajene ehokardiografske parametre. Primarni ishod bila je progresija u trajnu FA, odnosno trenutak kada smo odustali od pokušaja vraćanja u sinusni ritam.

Rezultati: Od 409 bolesnika s „ne-trajnom" FA, tijekom praćenja 109 (26,6%) ih je razvilo trajnu FA. Upravo su ti bolesnici imali značajno nižu eGFR (eng. *estimated glomerular filtration rate*), bili su stariji, imali su viši indeks tjelesne mase, više CHA_2DS_2-VAS, HATCH i LADS bodove, veći promjer lijevog atrija (LA), više vrijednosti C-reaktivnog proteina, RDW-a (eng. *red cell distribution width*) i MPV-a (eng. *mean platelet volume*), veći dio njih imao je arterijsku hipertenziju i ranije preboljeli moždani udar. Multivarijantna Coxova regresija pokazala je jedino veći promjer LA i viši RDW kao značajne, nezavisne čimbenike za progresiju „ne trajne" u trajnu FA. Korigirani LADS rezultat (promjer LA 45mm i uz vrijednosti RDW-a od 14,5%) <4 nije se pokazao značajnim pokazateljem progresije FA, a korigirani HATCH rezultat <3 pokazao se kao značajan neovisan prediktivni čimbenik nastanka trajne FA, također je bio najbolji pokazatelj s negativnom prediktivnom vrijednosti (0,87). Niti jedan parametar koji smo istraživali nije imao značajnu pozitivnu prediktivnu vrijednost za progresiju FA (> 0,60).

Zaključak: Veličina LA i vrijednost RDWa značajno smanjuju očekivani rizik progresije paroksizmalne i perzistentne FA u trajnu. Iako je teško predvidjeti nastanak trajne FA, bolesnici s LA ≤45 mm i RDWom ≤14,5% i HATCH rezultatom <3 imali su najmanju vjerojatnost progresije AF i najvjerojatnije su najbolji kandidati za strategiju kontrole ritma.

Background: Stratifying patients with paroxysmal or short-term persistent atrial fibrillation (AF) who are at greater risk of developing permanent AF is challenging. There are studies on predicting persistent AF in patients with paroxysmal AF, but studies evaluating natural course of progression to permanent AF are rare.[1,2] Aim of our prospective study was to evaluate utility of routine demographic, clinical, laboratory and echocardiography parameters, together with evaluated risk scores in prediction of AF progression to a permanent form.

Methods: In the period of 30 months we prospectively recruited 409 patients with paroxysmal or short-term persistent AF who were treated at discretion of the referral cardiologist in University Hospital Dubrava and followed them for a median follow-up time of 21 months. Clinical, laboratory, and routine echocardiographic parameters were collected. Endpoint was progression to permanent AF when further attempts to restore sinus rhythm were abandoned.

Results: Out of 409 patients with non-permanent AF, 109 (26.6%) progressed to permanent AF during follow up. Patients who progressed had significantly lower estimated glomerular filtration rate (eGFR), higher age, body mass index, CHA_2DS_2-VASc score, HATCH score, LADS score, LA diameter, C-reactive protein, red cell distribution width (RDW) and mean platelet volume (MPV) levels, and also higher proportions of arterial hypertension and previous stroke. In multivariate Cox regression model only increased left atrium (LA) diameter, and increased RDW showed significant independent association with progression. When corrected for LA size at 45 mm and RDW level at 14.5% LADS score dichotomized at <4 did not show significant effect on progression, whereas corrected HATCH score dichotomized at <3 did show significant independent effect on AF progression during follow up and had the best negative predictive value of 0.87. None of the observed parameters showed a positive predictive value for AF progression >0.60.

Conclusion: LA size and RDW levels strongly moderate estimated risk of AF progression. Although it is still challenging to predict progression, patients with LA size ≤45 mm and RDW level ≤14.5% and a HATCH score <3 had the least probability of AF progression, and are most probably the best candidates for rhythm control strategies.

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LITERATURE

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