ABSTRACT

Atrial fibrillation is the most common cardiac arrhythmia, whose estimated annual incidence rises to 10 in every 1,000 patients. Epidemic growth is foreseen that during the next decade arrhythmias, according to studies. Unlike other arrhythmias, FA has a progressive evolution from paroxysmal episodes, first isolated more episodes to frequent and prolonged up to be permanent.

The work is structured so that includes a first theoretical part and a second containing my own research.

The general part of the thesis consists of four chapters: the first contains synthetic etiopathogenic considerations on FA, aiming mainly its electrophysiological mechanisms of initiation and maintenance, electrical and structural remodeling processes and main precipitating factors, the second chapter presents a structure of cardioembolic risk factors, comorbidities and their interdependencies with AF shown in Chapter 3 of the general part in the last chapter being exposed theoretical problems of thrombogenesis and cardioembolic risk of FA and opportunities of prevention through anti-thrombotic medication.

The theoretical part ends with an extensive bibliography (120 titles), inserted entirely in the text and ordered in the order of use

The special "part of personal contribution" includes two studies performed on separate lots , being retrospective ,observational, analytical, with objectives, materials and methods, results , discussions and conclusions that separate and overall analyze issues contained in title, as factors of progression of AF and prognosis of these patients related primarily to major complications, stroke and heart failure.

In the first study, I set out to find possible clinical and ecocardiographic correlations between the progression of paroxysmal AF to persistent or permanent form and evaluate the prognosis of patients with progression, first of all related to complications of cardioembolic stroke.

The study was conducted over a period of three years, and has enrolled 432 patients with persistent AF form or paroxistical nonvalvular AF (converted to sinus rhythm) of 4 th Medical Clinic from Mures County Hospital and who were followed up one year after inclusion. We considered patients having permanent AF form at one year follow-up, those

patients found at the one year control in AF and to whom has been decided by patient / doctor consensus the non-intervention to restore sinus rhythm.

We followed as factors of likely clinical progression those comprised in the HATCH score (hypertension, age> 75 years, stroke, COPD, and heart failure), to which have been added others such as diabetes mellitus (DM), coronary artery disease, malignancy, chronic renal failure, lower limb peripheral arterial disease.ta a membrelor inferioare.

Besides clinical factors listed there have been followed routine transthoracic ultrasound parameters: size of AS, VS and LVEF, and medications introduced in order to preserve sinus rhythm or in the treatment of organic heart disease. Statistical processings focused progression-free lot compared to that which has been registered progression to permanent AF .

The results reveal a HATCH score significantly higher in the group with the progression ($p = 0.028$), in turn, calculation of statistical significance for each component of the score result is not convincing, except for the heart failure, whose presence was very statistically significant in the progression of AF ($p = 0.003$).

Regarding the administred medication, the statistical calculations shows the arrhythmogenic effect, favored by the progression to permanent form of digoxin and diuretics used as background therapy and adverse effects of propafenone ($p = 0.049$) used unsuccessful for the purpose of maintaining sinus rhythm.

Among ultrasound parameters followed, it is mentioned that increasing AS dimensions has been the strongest predictive factor for the progression of AF ($p = 0.0001$)but also LV size ($p = 0.029$) and decreasing the LVEF ($p = 0.021$) had statistical significance in the progression

On prognostic evaluation of the lot, depending on the stroke occurring during follow-up, patients were divided in groups according to antithrombotic therapy instituted: A) oral anticoagulation (ACO), B) aggregating, C) anticoagulant and antiplatelet, D) without anti-thrombotic medication. The large number of subjects in group B) -131 patients lies in the impossibility of establishing oral anticoagulation out of different causes. The indications prophylaxis of cardioembolic events has been made based on CHADS2 score. Reassessing the whole lot (432 patients) after the current score- CHA2DS2 VASC explain the situation of finding the maximal incidence of stroke in medium risk class CHADS2 because by affixing the new score score 90% of the new middle class are assigned at risk class .

Study # 1 ends with clear conclusions on the stage.

In study # 2 I proposed to comparative evaluate the thromboembolic risk through ultrasound and clinical methods in patients with paroxysmal versus persistent AF and to establish the selection criteria for pre-ablation transesophageal echocardiography, depending on risk category evaluated through CHADS2 score

The statistical analysis of data revealed a direct relationship between CHADS2 score ≥ 2 and thrombosis of LA , also has revealed a direct correlation between low emptying velocities emptying of LA measured through transoesophageal ultrasound and the presence of spontaneously echo contrast.

CURRICULUM VITAE

Personal data :

Name : Dorgo Monica Letiţia

Adress : 14 Braila street – Târgu-Mureş , Dep. Of Mureş, Roumania

E-mail: monicacarasca@yahoo.com

Telephone/GSM : 0040748147753

Birth date : 10 th February 1979

Nationality : Romanian

Marital status : in a relationship, not married

Function : universitary assistant and internal medecin specialist

Responsabilites : preparing the semiology students in our university for the practical experience in their stages , scientific research in internal medicine , night shifts as first line in our Hospital of Internal Medicine

Background :

- since the 15 th march 2010 specialist in internal medicine , exam graduated with 9,28
- 15 th of march 2010 exam for obtaining the Speciality of Internal Medicine
- 2005 – march 2010 - resident in Internal Medicine in the IV Universitary Internal Medicine Hospital
- february 2005 – exam for admission in the superior universitairy and since 28 th february 2005 – Universitary assistant in Internal Medicine

2004 – the exam for obtaining the licence in medicine

1998-2004 –student in the University of Medicine and Pharmacy , Târgu-Mureş

1993-1997 – pupil in the Theoretical College of Unirea,the Chemistry and Biology Departement , Târgu-Mureş

Stages – professional experience :

- 2005 - 2010 – resident in internal medicine - the stages of residency being acomplished in the IV Medical Clinic, Emergency Hospital of Targu Mures , the Endocrinology Clinic – 3 months , Rheumatology – 3 mois, Anestesiology and Intensive care – 3 mois, Radiology and et medical imaging – 3 mois , for the mentioned stages
- Since 15 march 2010 until present specialist doctor in internal medicine in the IV Internal Medicine Clinic , Targu Mures

Participation in postuniversitary courses :

- Combined therapy -from controling de arterial blood pressure to reno-vascular protection , Târgu Mureş , May 2005
- Gastro-oesophagean reflux disease and its complications, Targu Mures , March 2005
- Gastroenterological emergencies , Daniela Dobru , Târgu Mureş ,November 2007
- Cardiac pathology in pregnant woman , Caraşca Emilian , Târgu Mureş , November 2008

Scientific activity :

The Scientific Student s Session , 2004, Targu Mures:
Pioglitazone versus metformin in the treatment of type 2 diabetes , Daniela Ciomoş, Dorgo Monica

Univeristary Conference of didactic members , December 2005, Targu-Mures :
Light reflexion rheography , A.Incze , Dorgo Monica , C.Albert

National Conference of Internal Medicine, avril 2006, Calimăneşti Căciulata :
The use of photopletismography in the early doagnosis of organ damage in la essential hypertension , A.Incze, E.Caraşca, C.Podoleanu, Dorgo Monica

National Conference of the Romanian Society of Diabetes , November 2006, Craiova :
Estimating the arterial rigidity through digital photopletismography in diabetic patient , A.Incze, Dorgo Monica, Mirela Orosan

Universitary Conference of didactic members , December 2006, Târgu Mureş :
Digital photopletismography and Doppler 10 MHZ technique in radial artery level , marker of the diastolic disfunction of big arterias in early stages of arterial hypertension , A.Incze, Buzogany Jazmin, Monica Dorgo

National Conference of Gastroenterology , 2007 :
Magnification endoscopy and cromoscopy in the diagnosis of mucosal pit – patterns in Barrett Oesophagus , Daniela Dobru , Monica Dorgo , Simona Mureşan

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M.Pop, C.Podoleanu, M.Dorgo, E. Caraşca - Târgu Mureş , Romanian Cardiology Revue, vol.123 , 2008

2009 – 1st February - 1st March – research scolarship Erasmus in Bordeaux, Hopital Hautleveque , with proffeseur Raymond Roudaut and Michel Haissaguerre and publication on the predictive factors of tromboembolic risk in atrial fibrillation

2009 – November , certificate PROFEX C1 in English Medicine

2010 – September, certificate of polisomnography obtained at Timisoara

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Publications :

The leg venous pathology – practical advices , University Press Editure , 2006
Author : A.Incze, E.Carasca
Co – authors : Monica Dorgo , C.Albert

Foreign languages :

- French : advanced spoken and in writing
- English - advanced spoken and in writing, PROFEX C1 certificate obtained in November 2009