

**CHARLES UNIVERSITY IN PRAGUE
FACULTY OF PHARMACY IN HRADEC KRALOVE**

Pharmacy

Review of diploma thesis

Student: **Zisis Papadopoulos**

Mentor of the thesis: prof. RNDr. Jiří Vlček, CSc.

Year of the defence:

Reviewer of the thesis: MUDr. Karel Macek, CSc.

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Title of diploma thesis:

**ANALYSIS OF PHARMACOTHERAPY AND DRUG RELATED PROBLEMS IN
PATIENT WITH ARTERIAL HYPERTENSION IN GREECE**

Formal comments: number of pages: 73, number of graphs: 17, number of figures: 17,
number of tables: 8, number of references: 48

Type of work: Experimental

- a) Aim of the thesis is: Fulfilled
- b) Language and graphic level: Very good
- c) Processing of theory: Excellent
- d) Methods description: Good
- e) Results description: Very good
- f) Discussion and conclusions: Very good

Reviewer comments:

This thesis is dealing with very important theme from clinical point of view, it is appropriate for a pharmacist, even clinical one. Arterial hypertension is one of leading problems in detection of drug related problems and analysis of pharmacotherapy. Its prevalence is high in most of countries and/or regions.

In the first part is the theory of arterial hypertension described: sign and symptoms, pathophysiology, classification and process of diagnosis. The reason to treat hypertension is prevention of vascular complications, the deep understanding of it is clear reading this text. It is important for pharmacist to understand those aspects, it is a great advantage for next evaluation of therapy a process of detection of drug related problems. Author writes this chapter in a detailed way, using modern information, in case of pathophysiology and classification on the base of modern guidelines. The blood pressure values for well treated hypertension and for different subgroups of hypertonics have changed recently, the general borderline value is 140/90 mmHg.

The main goal for pharmacist is the opinion on therapy. Pharmacotherapy of hypertension is a long- term: individual, step by step, combination of drugs and changing in time. The first part of this chapter describes the importance of non-pharmacological treatment, life style changes. This can be also the role of pharmacist in management of arterial hypertension. The discussion can be about the morbidity and mortality statistical data for those approaches from the view of evidence based medicine.

The main groups of antihypertensive drugs are listed in the thesis. Pharmacology of antihypertensives is an interesting play. Author understood this characteristic and use many tables for indications, contraindications and side effects of groups of antihypertensive drugs.

Treatment cascades and/or algorithms, drug choices are presented in logical tables and schemas, it brings complex information. Used references are on time. I have no comments except the position of Aliskiren in treatment of hypertension.

Maybe the central position in the thesis has a chapter about drug related problems. All of us, we know that it is complicated process, definitions and classifications are changing fluently, it is very sensitive for co-operation with doctors, many factors influence the final effect of drug in organism. Tables content all important aspects of drug related problems detection, prevention, solution a documentation. Most of information is in form of commented tables. It brings rich and structured information, sometimes little bit difficult for orientation. Similar difficulties are with management of compliance respectively non-compliance, author brings rational data, evaluate strictly and with understanding of situation in a real life. I would like point out the high value of this chapter, it is over the diploma thesis needs.

The last but not least is experimental part of thesis. As the theme is interesting, the results can be expected with hope. Method of data collection is simple but appropriate to the goal of work. The co-operation with cardiologist should have been known for both, as doctor as well for a starting clinical pharmacist. The large theoretical basis can be seen in presentation of results. Use of different groups of antihypertensives, in different age groups of patients are in detailed graphs and tables. There can be no statistically important results because of number of patients. But the goal of thesis has been fulfilled as the situation in a real daily life is described perfectly. The evidence is position of sartans in treatment which does not strictly fit with guidelines, but these guidelines are changing just know in the direction in this thesis. Sartans are equivalent to ACE inhibitors. Another aspect is from daily practice. Drug related problems were detected in an interview with cardiologist. I don't know how the DRPs were documented but I am sure that experienced cardiologist is an appropriate source of information about them.

Questions: The reading of results is interesting, graphs and tables are on a professional level, the discussion is also fine to read, the references are modern and the evaluation of results is logical.

I have two main negatives. These are the discrepancies of Czech and English version of abstracts in the beginning of thesis. The information had been collected for four months or years? Hypertension was most frequent in elderly or in men? The second is on page 37 where the definition is of serious adverse event, serious is missing.

Questions

1. Are there any evidence based data for effect of non pharmacological treatment of arterial hypertension?
2. Are there any tendencies in using of drugs in different age groups, differ the age groups in frequency of side effects of drugs?
3. What is your personal experience in co-operation with cardiologist, have you contacted patients?

Evaluation of diploma thesis: Excellent, to defense: Recommended

In Hradec Kralove 26th May 2014

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