

B. Abstract

This habilitation thesis represents a mirror of my scientific activity after public lecture of my **Doctoral Thesis** and confirmation as **Ph.D.** by the Minister of Education, Research and Innovation no.4387/06.06.2011 entitled "*Surgical treatments in upper digestive bleedings caused by esophageal variceal effractions - the value of azygoportal disconnection in emergency*", scientific coordinator **Professor Constantin Copotoiu** from the **University of Medicine and Pharmacy Tîrgu Mureș**.

This work highlights my continuous concerns to improve surgical techniques performed at the **1st Surgery Clinic of Clinical Emergency County Hospital from Tîrgu Mureș**, whose member I am since **1991**.

Topics addressed in this thesis habilitation represent me in all professional aspects: surgical, managerial, teaching and research.

This thesis translates on paper the most important moments in my evolution, and between the lines you can read many sacrifices and renunciations, accomplishments and dreams.

The thesis is divided into five chapters, **the first part**, highlights the most important teaching and research achievements, professional and managerial surgical inseparable in their dynamics and always perfectible.

The second part of the thesis reviews my contributions in implementing and improving **surgical techniques without ligatures**. The surgeries which are applicable to these type of interventions are exemplified by operating times, accompanied by intraoperative suggesting images that are part of my **personal video library** and which are found mostly in my publication entitled "**Atlas of surgical techniques by open approach without ligatures**" (2013) as the **single author**. Also, references point out on publications as author and coauthor in this surgical field, work which is the result of research activities sustained by **two grants** won by competition with external funding by the University of Medicine and Pharmacy from Targu-Mures:

- *Advantages and disadvantages of LigaSure systems - prospective study on clinico-pathological aspects after using "without ligature" techniques* (2014-2015).
- *Preservation apparatus sphincter in patients with low rectal cancer - study comparing LigaSure system efficiency and suture mechanical systems* (2014-2015).

Scientific data dissemination was materialized by numerous scientific papers published in the form of abstracts in many conferences as **ISI** and **B + / BDI** Journals suppliments. In fact, one of these works was **awarded**: "*Considerații clinico-evolutive postoperatorii imediate privind operațiile de conservare a aparatului sfîcterian în tratamentul cancerului ano-rectal inferior*", C. Russu, C. Copotoiu, V. Bud, G. Serac, C. Nicolescu C. Rad, P. Cucea C. Szilaghi C. Molnar received Iacomi-Răzeșu prize at **"XXXVI Meeting of surgeons in Moldova "Iacomi Răzeșu" and of the VIII International Conference of Surgery"** (Piatra Neamt 23 - October 26, 2014).

Being a teacher approached to the young generation (students and residents) I was closely involved in scientific students work (**53 graduate papers** coordinated over more than **26 years** of teaching). I tried to implement surgery without ligatures among students, too. This goal was materialized with workshops and lectures at student's conferences. As coordinator and invited lecturer I had a close collaboration with **UMPh Students League** and **Romanian Students' Surgical Society**. Involving new generations of physicians in learning these techniques represents for me the **greatest teaching reward**.

In the **third part** of the thesis I proposed the enlargement development of surgery without ligatures, by implementing it in an increasingly wide range of conventional surgery. Together with its introduction and its **diversification** in minimally invasive surgery.

In the **fourth part** I present my concerns about most recent surgical prospective of localized **low rectal cancers** treatment, where surgery without ligatures allows new approaches in order to preserve the

sphincter apparatus. In this chapter I used examples based on my **personal casuistry** regarding **intersphincteric rectal resection** using open or laparoscopic approach.

In the **last part** I set new directions of development in research based on my previous scientific, academic and surgery expertise. They are addressed mainly towards students and PhD students while promoting and extending the integrated research network within the No. 1 Surgical Clinic. As an Assistant Professor and Head of Surgery I will contribute to sustaining clinical and experimental trials following evidence based medicine respecting the Charter of the University and the ethical and deontological conditions for the elaboration of PhD theses corresponding to the European standards.