SUMMARY

The doctoral thesis **Endoscopy in digestivetractsurgery of the dog** is legally build specifications in two parts: part I, **Current stage of knowledge regarding the role of endoscopy in digestive tract surgery of the dog** is extented on 36 pages, consisting of 18,65% of the entire work, and part II, **Personal contributions**, extented on 157 pages, consisting of 81,34% of the thesis.

In the first part of the work, reserved for the stage of knowledge, structured in two chapters, there are presented the morphology and the physiology of the digestive tract segments and it is described the endoscopic technique, emphasing the preparation for endoscopy and the technique for each digestive segment: esophagus, stomach, small intestine and large intestine.

Part II is structured in four chapters and comprises the research purpose and orientation, material and methods, results of the research and their interpretation and the general conclusions along with recommendations.

Specific literature of the last years is signaling the role of the endoscopy technique in the diagnostic and treatment of surgical pathology of the canine digestive tract in comparison with invasive methods. This is why the objectives of the research are:

- Highlighting the role of digestive endoscopy, as a non-invasive method, compared to classical methods, executed on the digestive tract segments.
- Comparing and corelating results of the digestive endoscopy with the ones obtained by ultrasonography, radiography and microscopic examinations.
- Pointing out surgical pathology of the digestive tract segments that is benefiting of complex treatment generated by the the combination of invasive and endoscopic techniques.

- Promoting endoscopy as paraclinic method in the diagnostics and treatment of surgical pathology of the digestive tract.

The research is ment to promote digestive endoscopy in Romania and to highlight the benefits of such technique, growing in this way the prestige of veterinary medicine.

Greatest part of the research was done in Salvavet Ilioara Animal Hospital. The hospital is equiped with endoscopic equipment, ultrasonography machines, x-ray machines, in-pacient capabilities and the logistics for large scale surgical procedures.

In the same time, experience was accumulated in Animal Center Clinic and Royal Veterinary College, which allowed to organise the first veterinary digestive endoscopy continuous education practical course in Romania.

Based on the content, the paper has a strong practical importance, serving current small animal practice and it is in the same time a step forward in developing endoscopic technique in digestive tract surgery.

The work is based on 151 canine subjects wich were presented with digestive surgical pathology, location and frequency of which was variable according to the interested digestive segment.

In this doctoral thesis, gastric diseases represented 44,7%, esophageal pathology was 35,8%, small bowel was 8,6% and only 7,9% of cases for large intestine.

Most of the described and used methods are of endoscopic origin and being continuously subject of comparison and corelation with ultrasonographical technique, radiological technique and microscopic technique.

Chapter V is larger and gathers the most important pathology of the digestive tract that benefits from the use of endoscopy. There is scientifically disected the pathology of the esophagus, stomach, small intestine and large intestine, following a logical pathern for information display.

As introduction we fiind few clinical data for each studied segment, sustaining the medical intervention, generalities of endoscopic diagnostic, followed by an extended chapter of results obtained in surgery of the esophagus, stomach, small intestine and large intestine.

The esophagus presents itself with relevant situations of foreign bodies (27,7%) as ways of diagnostic and retrieval and related situations as trauma (27,7%) and esophageal strictures (11,1%).

There are detailed ways of identification and endoscopic assessment for megaesophagus (11,1%), displacement of the esophagus (3,7%) and it is reserved a spacial comment for esophageal tubes (16, 7%), as importance in therapy and means of placing the tubes and also the

endoscopic assessment. We believe that the esophageal tubes chapter is relevant for current therapy protocols. In this way it is highlighted the role and possibilities of use for digestive flexible endoscopy, associating endoscopy with surgical techniques and also the way these tubes can be adapted and used in veterinary medicine for upper digestive tract pathology treatment. There have been described naso-esophageal tubes and esophagostomy tubes, both techniques being ilustrated with detailed relavant images for every step of the procedure.

Gastric pathology is dominated by foreign body situations (8,3%) with associated diagnostic/intervention difficulties and first surgical emergency in dog Gastric Dilatation/Volvulus (GDV) complex (27,8%).

Foreign body chapter is extensive and centered on current practical pathology. We tried to describe all the advantages of the flexible digestive endoscopy in rapid diagnostic, intervention and assessment possibilities, aswell the complementarity to classical surgical procedures. There were also presented the disadvantages and limits of the endoscopy in such cases. In the doctoral thesis, the display of the clinical cases was subject for comparison of the non-endoscopic diagnostic, by simple or contrast radiology with the endoscopic technique. It has been studied the way different structure and density foreign body materials can be assessed with x-ray exposure and wich of the technique is best to use. In the end there are clinical cases in wich radiology and endoscopy are complementary to classic surgery, all of them together successfully treating the pacient. Although endoscopy is the central piece in this research, there were situations in wich endoscopy alone was not enough for precise and rapid diagnostic or for complete and successful intervention, finding so its limits.

Next chapter is dealt in a complex manner, including a true surgical management of GDV (27,8%), followed, for the first time, by endoscopic prevention technique method PPEG (Preventive Percutaneous Endoscopical Gastropexy), discovered during research in 6 cases (8,3%). In the GDV protocols, endoscopy occupies a well known position. We can use endoscopy for diagnostic of GDV, rapid decompression of the stomach and for post-operatory assessment. PPEG is a step forward in preventing GDV with low-invasivity methods in our country. This methods was developed during research and it is a valuable addition to existing preventive methods for GDV. There is little literature knowledge about this method and we considere it an avantgarde procedure. PPEG can be complete don the healthy animal with minimal invasivity and fast recovery. We would like to further develop and promote this technique in veterinary practices. The chapter of gastric pathology is completed by spectacular results concerning the role and inter/intraspecific transmission of Helicobacter spp. In the same manner limphocytic plasmocytic gastritis it is described and identified by endoscopy and in some situations i tis recommended surgical treatment.

The key element of endoscopic biopsy sampling chapter is the public health concern regarding gastric Helicobacter spp. In canines with digestive simptoms. We found that 69% of all samples from clinical cases are positive for Helicobacter spp. Our suspicion is that by close every day contact this microorganism can cross species barrier, humans and dogs being able to be sources of infection for each other. Our staining rapid method is easy to use and can be successfully implemented in regular practices, reducing diagnostic time.

PEG tubes are the final part of the gastric endoscopy, revealing their role, procedural steps and the benefits in small animal therapy, being less used in current practice in Romania. In this research we studied PEG tubes on the left and on the right side of the animal, the last one being the less used and described and has been aknowledged in a logical pathway. We found that using the right side for PEG tube placement, one can prevent the GDV through adhesions which block the clock-wise rotation of pylorus.

Duodenal haemorrhage (25%) and enteric foreign body (50 %) along with a Romanian premiere, intraoperatory endoscopy (25%) build the small intestine chapter. The intraoperatory endoscopy(IOE) is a first in Romania, local references missing from the literature and practical tradition. Although it is a difficult technique the used and described method is feasible for reaching different pathological entities that are unreacheble by other diagnostic techniques. Development of the IOE was limited by the lenght of the endoscope and of the intestinal loops, acces incisions being useful and with no repercussions or complications.

The colon and the rectum are comprised in the research from the point of view of the colic intussusception (23,1%), perineal hernia (30,7%), rectal compressions (23,1%) and post operatory assessment of colic sutures (23,1%).

One can fiind in the general conclusions chapter the importance of the endoscopic examination for digestive surgical pathology in canines.

The research led to a rich documentation, most of it in images, the difficuly being to select the most representative situations and to display essential information in a manner that conducts to a better medical act.