Annals of *Spiru Haret* University

Veterinary Medicine Series
Year XXIII, no. 23, volume 1, 2022

EDITURA FUNDAȚIEI *ROMÂNIA DE MÂINE*
BUCHAREST

A Publishing House classified by the *Ministry of National Education and Scientific Research, by the National Council of Scientific Research, Category C (areas Philology, Philosophy, History and Cultural Studies, Architecture and urbanism, Performing Arts)*

http://www.edituraromaniademaine.ro

ISSN-L: 1454-8283; ISSN 2501-7780 (online)

CONTENTS

THE USE OF RECEPTAL AND CHORULON IN INTACT BITCHES

Aneta Laura TUDOR
Spiru Haret University, Faculty of Veterinary Medicine, 256 Basarabia Ave., 30352 Bucharest, Romania
laura.tudor@spiruharet.ro

Abstract
Often, bitches end up at the vet clinic because they present numerous problems in the genital, behavioural or dermatological area that are actually caused by disturbances in the physiology of the sexual and ovarian cycle. After a routine ultrasound check, it is found the presence of ovarian cystic formations, of large size (over 10-15 mm), most often, bilateral.
Keywords*: Receptal, Chorulon, study, research, case study*

Introduction

Many times, these bitches do not have fertile mounts or they do not accept males, also presenting signs as: an irregular estrus cycle, nymphomania, aggression, prolonged estrus (up to 4-5 weeks) etc.

The problems discussed are also of an economic nature, the respective females being of great cynological value, but the lack of fertile mounts decreases the value of the specimens [1,2].

That being said, ovariohysterectomy is not an option, so a multimodal therapeutic approach to ovarian follicular cysts (Fig.4) was attempted.

Materials and methods

At the study participated 15 females, aged between 1.3 and 6 years:

- 8 German Shepherd
- 2 German Brac
- 3 Maltese Bichon
- 2 Dachshund

The Ultrasound (Fig.1.) was performed with a portable Esaote Alpha Multicrictal ultrasound with a 7.5 Mh, microconvex probe. Follicular cysts were identified in all females participating in the study as hypoechoic formations on the surface of the ovary, usually bilateral, of different sizes – between 10 mm and 100 mm in diameter.

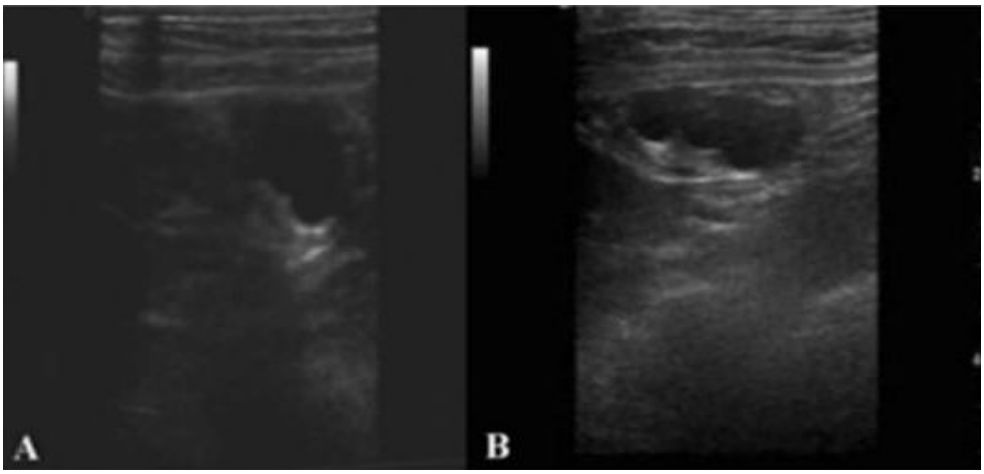

Fig. 1.

They remained unchanged in size and appearance on 3 repeated ultrasounds (Fig.1), performed 3 weeks apart for each animal in the study. In general, the mature ovarian follicle can measure, depending on the bitch size, up to 8-10 mm. Sometimes its appearance can be confused with an follicular cyst, though the mature ovarian follicle does not remain unchanged for a period of about 2 months (as long as it was kept under ultrasound observation in each female).

Fig. 2.

Fig. 3.

All the females in the study presented, in addition to the change in the duration of the sexual cycle, (interestrus distances of 7-8 months) and periods of estrus that did not end in heat, due to the fact that they presented exaggerated libido, reactivity and non-acceptance of the male. Besides, these signs were, also, noticed:

- Profuse, bloody vaginal discharge that exceeded 3-4 weeks (3 German Shepherd females and 1 Bichon Maltese female);

- Exaggerated vulvar edema, accompanied by excessive vulvar licking (2 German Shepherd females);
- Abdominal discomfort on palpation;
- Lack of appetite or capricious appetite.

The therapy that we used was compound from 2 commercials products: Receptal (Fig.2) and Chorulon (Fig.3).

Receptal (Fig.2) or Buserelin acetate is a realising-hormone identical with the natural serum gonadotropin-realising hormone. GnRH controls the production and secretion of FSH and LH by the pituitary gland, therefore the administration of Receptal (Fig.2) induces the release of FSH and LH, stimulating both follicular development and ovulation, also luteinization, in the present case that was the aim of the therapy. Receptal (Fig.2) was used in all 8 German Shepherds females.

The following therapeutic regime was administrated to all 8 German Shepherds females, aproximately one month after the end of estrus:

- 4 females – 50 μg/kg 3 times every 48 h (i.m.)
- 4 Females – 100 μg/kg twice every 48 h (i.m.)

The second batch was composed of German Brac, Dachshund and Bichon Maltese females and benefited from another type of receipe – Chorulon (Fig.3) 1500 UI – which has chorionic gonadotropin as its active substance. This has a predominantly LH-like action on the ovary (and less FSH-like), obviously aiming for the luteinization of cystic formations previously observed in the ovaries.

Thus, the treatment was:

- 500 IU/bitch i.m. 2 administrations every 48 h for German Brac and Dachshund females;
- 200 IU/kg i.v. only once in all 3 Bichon Maltese females.

Results and discussions

The follow-up of the results was done ultrasonographically, through 3 abdominal ultrasounds, 1 week one from each other, performed for each participant in the study.

There were minimal adverse reactions to the treatment: 2 German Shepherd females and one Dachshund female showed inappetence and a slight listlessness for several days.

After the first week after the end of the treatment, it was observed a decrease in the size of the cysts in two females (one German Shepherd and one Bichon Maltese).

After the 2nd week, a decrease in cyst sizes was observed in 9 other females (6 German Shepherds, 2 Dachshunds and one German Brac).

When performing the 3rd ultrasound check, it was found the remission of follicular cystic formations in 3 females: one German Shepherd, one German Brac and one Bichon Maltese.

In one of the Bichon Maltese females, it was found a partial reduction of the size of the cysts (Fig.4) (by aprox. 50%), but also significant uterine changes (appearance of cystic endometrial hyperplasia), which latter led to an ovariohysterectomy at the owner's request.

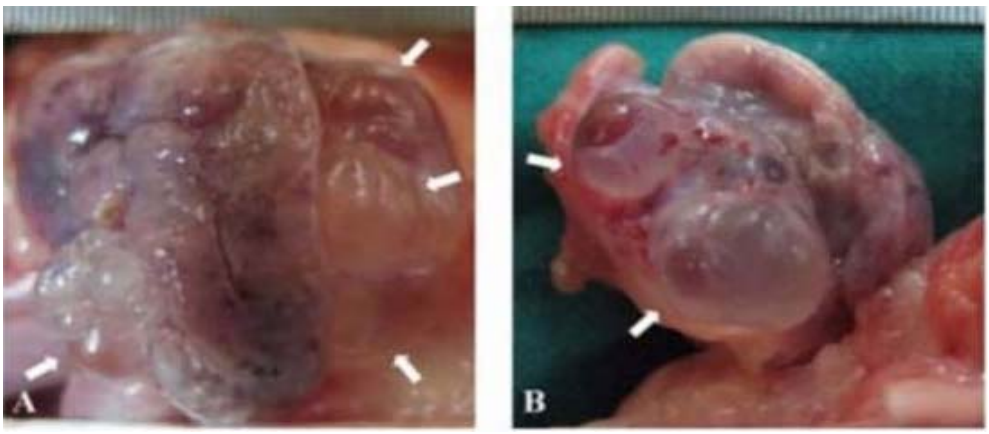

Fig. 4.

Also, a German Shepherd female received local treatment (baiting with Betadine) for 5 consecutive days, as well as an systemic antibiotic therapy for 3 consecutive days (Amoxicilin with Clavulanic acid), because it presented exaggerated vulvar edema and excessive toileting, followed by slight erosions of the genital region.

Conclusions

The treatment of follicular ovarian cysts (Fig.4) with both Receptal (Fig.2) and Chorulon (Fig.3) was beneficial, 14 of the 15 females subjected to the study showed their disappearance at ultrasound (Fig.1) exam. Also, the clinical signs for which the owners went to the doctor disappeared.

For Chorulon (Fig.3), future testing of other doses and dosing intervals was consider to assess in order to see if the treatment plan that had been used for the Bichon Maltese female was or not the cause for pyometra (200 IU/kg i.v. once).

At the end of the therapy, all 14 intact females remained pregnant within a maximum period of 12 months; also, during this observation period, none of the patients presented the recurrence of the initial clinical signs.

At the follow-up ultrasound checks performed on all 15 bitches 6 months after the therapy, no other ovarian, cystic or other type of formations were observed.

References

1. P K Chakraborty, D E Wildt, S W Seager (1982). *Induction of estrus and ovulation in the cat and dog*. Vet Clin North Am Small Anim Pract., vol. 12(1): 85-92.
2. De Gier J, Okkens AC, Kooistra HS, Vinke CM, (2012). *Behaviour and the pituitary axis in dogs before and after surgical or chemical castration with the GnRH agonist deslorelin*. In: *7th Quadrennial International Symposium on Canine and Feline Reproduction* (ISCFR), Whistler, BC, Canada, July 26-29, p. 54.

DIAGNOSIS OF A CASE WITH SKIN DISEASES FROM A BACTERIOLOGICAL POINT OF VIEW

Victor CALIN
Spiru Haret University,
Faculty of Veterinary Medicine,
256 Basarabia Ave., 30352 Bucharest, Romania,
e-mail: ushmv_calin.victor@spiruharet.ro

Abstract

To perform the work, pets with dermatological problems were examined, from which laboratory samples were taken.

Laboratory (bacteriological) examinations were performed, and the sensitivity of the germs to antibiotics was determined by performing the antibiogram.

Sowings were performed on simple and selective media.

Round bacteria were detected, with approximate dimensions of 1-1.5 microns, Gram-positive, which showed chain groups in the broth smear.

In the smears on the solid medium, round bacteria were observed, with approximate dimensions of 1-1.5 microns, Gram positive, which were in the form of agglomerations.

Based on the cultural and morphological characteristics, the detected bacterial strains were considered to belong to the genus Streptococcus.

Keywords: *antibiotics, dog, diagnostic, laboratory samples.*

Introduction

Bacterial infections of the skin of pets are generally secondary complications of other pathological conditions.

Dogs and cats are exposed to bacteria on a daily basis, and most of the time their immune systems are able to fight them off without showing signs of illness. Bacterial disease occurs when a pet's immune system is weakened and the bacteria can replicate and spread throughout the pet's body.

In addition, the cleaning practices of pet owners are essential to prevent disease. Skin infections in companion animals are the main reason for presentation in small animal practice and are generally secondary complications of other pathological conditions such as allergies, atopic dermatitis and adverse food reactions. When skin barrier dysfunction occurs, a tendency towards secondary bacterial infections is established [1,2].

Materials and methods

Measuring equipment:

Microflow niches, used for the protection of the space where the seeding operations described in this procedure are carried out and of the executor;

- refrigerators used to store media;

- freezers and refrigerators used to store samples.
- temperature-adjustable thermostats at 37°C, used for incubating seeded media;
- thermostats at 41.5°C, used for incubation of seeded media;
- Stomacher mixer, used for the homogenization of sample samples in solid state;
- microscope with camera, used for bacteriological examination;
- analytical balances, used for weighing the samples introduced into the work;
- temperature-adjustable thermostats at 30°C, used for incubation of seeded media;
- bacteriological lamps, used for sterilizing work surfaces;
- thermo-adjustable water bath, used to maintain solid media in a molten state at a temperature of 40-45°C;
- pH meter, used to check the pH of the medium (located in the medium preparation section);

Materials required:
- Erlenmeyer flasks of different volumes, sterile;
- sterile test tubes with different diameters;
- sterile graduated pipettes, with different capacities, with graduations of 0.1 ml, 1 ml, 2 ml, 5 ml;
- sterile Petri dishes, with different diameters;
- sterile glass beads;
- bacteriological loops with a loop with a diameter of approximately 3 mm, made of nickel-chromium and/or inoculation needles and sterile wands;
- stands for test tubes;
- tweezers/spatula;
- sterile graduated cylinders, with different capacities [3].

Methods:
Sowing, cultivating and incubating the samples is done by using simple culture media, selective media and special media.

Results and discussion

The samples were taken in a veterinary office in Bucharest, on animals with skin problems.

The investigated case was a two-year-old Caucasian shepherd dog with suspected left unilateral otitis, with local sensitivity, with the presence of reddish-colored cerumen, ihorous odor and increased consistency.

To perform the bacteriological examination, auricular secretion was sampled in the transport medium (sterile tube with sampling stick).

Sowings were carried out on simple media and on selective media.

The samples were initially seeded on simple culture media, to be incubated at a thermostat, at a temperature of 37°C ± 2°C, for a period of approximately 24 hours.

Determination of cultural characters:

The macroscopic changes were observed at the level of the grown culture media, respectively the identification of the emerging cultural characters.

In the liquid medium, a weak uncharacteristic turbidity appeared, with a small deposit at the bottom of the tube, which becomes powdery when stirred.

On the solid medium, transparent to semi-transparent colonies developed, with a diameter of approximately one millimeter, and a convex shape (fig. 1.1).

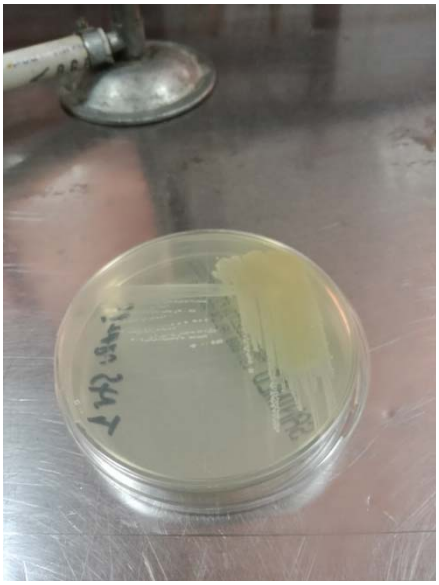

Fig. 1.1. *Semi-transparent to transparent colonies, with the diameter of approximately 1 mm., round, convex.*

Determination of morphological characters:

After the incubation of the usual liquid and solid media (broth and nutrient agar), the microscopic examination was performed following the Gram staining (fig. 1.2).

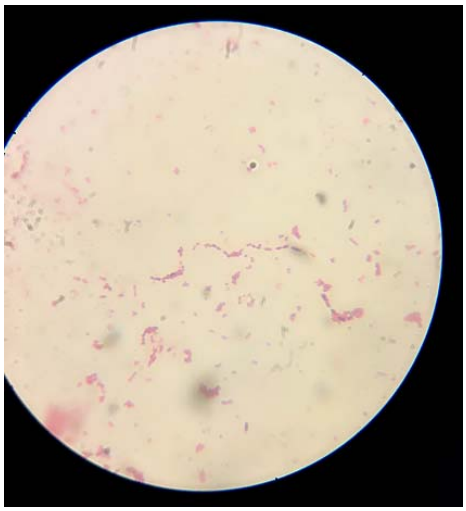

Fig. 1.2. *Smear from liquid medium. Round shaped bacteria (cocci), grouped strepto.*

Round-shaped bacteria (cocci) were detected, approximately 1-1.5 microns in size, Gram positive, which in the broth smear showed chain groupings.

In the smear on the solid medium, round-shaped bacteria (cocci) were observed, with approximate dimensions of 1-1.5 microns, Gram positive, which were found in the form of agglomerations (fig. 1.3).

Based on the cultural and morphological characters, it was considered that the detected bacterial strain belongs to the genus *Streptococcus*.

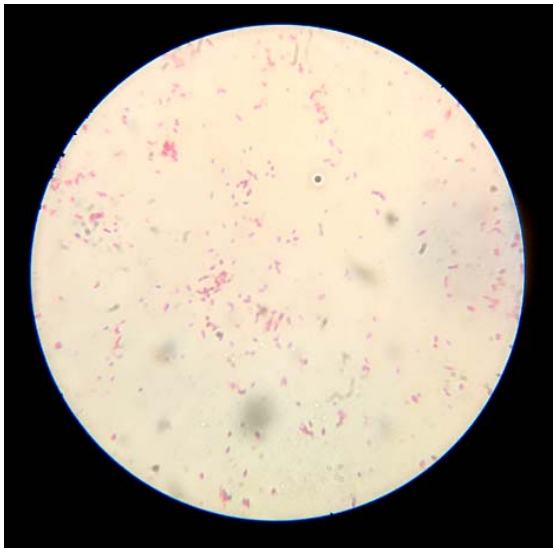

Fig. 1.3. *Smear on solid medium. Round shaped bacteria (cocci), Gram positive.*

Determination of the sensitivity of the obtained bacterial strain to antibiotics by performing the antibiogram.

The diffusimetric method was used.

From the pure bacterial culture on the agar, seeding was carried out in *Petri* dishes, so as to obtain numerous colonies of germs spread evenly over the entire surface of the medium, in the form of a lawn.

When evaluating the "in vitro" sensitivity of the strain detected in the sample, it is noted that only Gentamicin is active.

Compared to the other antibiotics, namely Cefuroxin, Ofloxacin, Cefalexin, Erytrimycin, Clarithromycin, Amoxicillin, and Streptomycin, the strain is resistant (table 1.1)

To prevent therapeutic failures, antibiotic treatments should always be based on the monitoring of sensitivity to antibiotics (antibiogram) carried out periodically at regular intervals (or as necessary in cases of force majeure).

Table 1.1.

The sensitivity of the strain obtained consecutively carrying out the antibiogram

No. Crt	Antibiotic	Sensitivity increased	Sensitivity moderate	Resistance enhanced
1	**GENTAMICIN**	**Yes**	**-**	**-**
2	**CEFUROXINE**	**-**	**-**	**Yes**
3	**OFLOXACIN**	**-**	**-**	**Yes**
4	**CEFALEXIN**	**-**	**-**	**Yes**
5	**ERYTHRIMYCIN**	**-**	**-**	**Yes**
6	**CLARITHROMYCIN**	**-**	**-**	**Yes**
7	**AMOXICILLIN**	**-**	**-**	**Yes**
8	**STREPTOMYCIN**	**-**	**-**	**Yes**

Conclusions

1. The present work presents the results of some laboratory examinations for the detection of pathogenic germs, from a pet (dog), which presented dermatological problems.

2. To perform bacteriological examinations, secretions were taken from the affected areas in sterile tubes with sampling sticks.

3. Bacteria of the genus *Streptococcus spp.* were detected.

4. After carrying out the antibiogram, an increased resistance to antibiotics was observed, the bacterium being sensitive only to *Gentamicin.*

5. It can thus be said that strains of streptococci located on the skin have a fairly high resistance to antibiotics.

References

1. MARSELLA, R.; DE BENEDETTO, (2017). *A. Atopic Dermatitis in Animals and People: An Update and Comparative Review*. *Vet. Sci.* 2017, *4*, 37.
2. MARSELLA, R. (2021). *Advances in our understanding of canine atopic dermatitis*. *Vet. Dermatol*. online ahead of print.
3. RĂDUCĂNESCU H., BICA POPII V. (1986). *Bacteriologie Veterinară*, Editura Ceres, București, p. 120-127.

PALLIATIVE TREATMENT FOR NASAL CARCINOMA TO THE DOG

-Case Study-

Marian SOARE, Ioana Cristina ANDRONIE

Spiru Haret University,
Faculty of Veterinary Medicine,
256 Basarabia Ave., 30352, Bucharest
e-mail: marian.soare@pspiruharet.ro

Abstract

Nasal neoplasms are common in dogs and are a challenge in establishing the diagnosis, but also the therapy, due to the limited location specific to the nasal cavities.

Sara is an 8.6-year-old female dog, sterilized, who presented to the veterinary clinic as a result of respiratory difficulties (dyspnea) in July 2021, represented by left nasal obstruction (serous rhinitis). She was treated with anti-inflammatory drugs and for about 3 months the clinical signs subsided.

Clinical signs reappeared, but did not subside after administration of anti-inflammatory drugs, and topical treatment (intranasal drops) with Vibrocil was used to facilitate breathing during the night (after administration of intranasal drops, the female could rest for 1-2 hours).

Blood tests (hemoleukogram, biochemistry) were performed, followed by radiographs (cephalic and thoracic). The results indicate a densification in the left nasal area, associated with an increased serum alkaline phosphatase.

Complementary investigations were recommended (cardiological and endoscopic examination - rhinoscopy, as well as histopathological examination after performing the nasal biopsy).

The histopathological diagnosis was well-differentiated nasal carcinoma and lymphoplasmacytic rhinitis. The material situation of the owner did not allow a specific treatment, so palliative treatment was used (CroniCare oil, Shitake - with lentinan and Onco Support), which has increased efficiency in significantly reducing respiratory discomfort 14 days after administration.

With the help of palliative treatment, the female led a "good" life for approximately 5 months, after this period her health deteriorated rapidly, within less than 3 weeks, the female being euthanized with the prior consent of the owner.

Keywords*: nasal carcinoma, dog, palliative treatment*

Introduction

Nasal and paranasal tumors are relatively common neoplasms in dogs, accounting for approximately 1 to 2% of all cancers and 70% of chronic nasal diseases in this species (Finck et al. 2015).

Two-thirds of nasal tumors are carcinomas, most commonly adenocarcinomas, although squamous cell carcinomas (SCC), undifferentiated carcinomas, and transitional carcinomas are also reported (Mortier J. R. , Blackwood L., 2020).

Dogs of dolichocephalic breeds are predominantly affected, especially Golden Retrievers, Labradors, German Shepherds, however, any breed can be affected (Mellanby et al. 2002, Yoon et al. 2008).

The average age of dogs at the time of diagnosis is 10 years, but dogs of all ages can be affected, nasal tumors have also been reported in dogs as young as 1 year (Sones et al. 2013).

Common clinical signs in dogs with nasal neoplasia are epistaxis, nasal discharge, sneezing, stertor or signs of nasal obstruction, epiphora, nasal congestion and dyspnea (Avner et al. 2008, Mason et al. 2013, Finck et al. 2014).

The condition can be unilateral or bilateral and can progress to facial deformity, associated with exophthalmos and neurological signs such as seizures and behavioral changes (Northrup et al. 2001, Weeden & Degner 2016).

The diagnosis of certainty is established following the guided nasal biopsy (rhinoscopy), used to obtain a histological diagnosis (Harris et al. 2014).

According to specialized literature, the average survival time of dogs with nasal neoplasia (allopathic treatment in combination with radiotherapy) was between 14 and 23 months (Henry et al, 1998, Thrall et al, 1983; Evans et al. 1989).

Materials and methods

Sara, species: canis familiaris, breed: metis, sex: female, age: 8 years, weight 41 kg, hormonal status: sterilized.

She was clinically examined and subjected to several complementary investigations:

- ✓blood tests (blood count and biochemistry);
- ✓hormonal analyzes (T4 and TSH);
- ✓urine analysis (urine summary);
- ✓radiological examination (radiographs - cephalic and thoracic);
- ✓cardiological examination (ECG, cardiac ultrasound), endoscopic (rhinoscopy) and histopathological examination (hematoxylin-eosin bichromic method).

Results and discussion

Animal data - name: Sara, species: canis familiaris, breed: metis, sex: female, age: 8.3 years, weight 41 kg, hormonal status - sterilized.

History – left nostril blockage (rhinitis) – July 2021, treatment with anti-inflammatories followed, the condition normalized until September 2021, rhinitis appears again in the left nostril, this time without yielding to anti-inflammatories, breathing difficulties (inspiratory dyspnoea) they appeared in the evening and continued throughout the night.

The intranasal administration of drops, topical administration of Vibrocil (phenylephrine/dimethidine maleate) - nasal decongestant (1 part - vibrocil and 4 parts - physiological serum) and saline aerosols were started, until December the animal's condition was good, towards at the end of this month he could no longer breathe even through his right nostril. After the topical administration of Vibrocil, the dog could breathe well for 2 hours at first, the time being reduced to one hour, the owners having to administer the drops hour by hour throughout the night.

Starting from 29.12.2021 until 05.01.2022 tarantula venom (THERANEKRON -Tarantula cubensis D6 – 1ml, product with immunostimulant effect) was administered by injection – 3ml/day/s.c.

In the meantime, he had blood tests (blood count and biochemistry), urine tests and x-rays (cephalic and chest), tables 1, 2, 3 and figures 1, 2, 3, 4.

Table no. 1

Medical analysis bulletin - Blood biochemistry (Sara, metis, female, 8 years old).

Parameters	*Results*	*Normal values*
GLU	*105*	*74-146*
BUN	*16.8*	*7.0-29.0*
CREA	*0.6*	*0.3-1.5*
B/C	*26*	
PHOS	*4.2*	*2.0-6.0*
CA	*11.5*	*9.0-13.*
TP	*7.4*	*5.3-8.4*
ALB	*3.3*	*2.2-3.9*
GLOB	*4.1*	*2.1-4.9*
A/G	*0.8*	*0.6-1.1*
ALT	*44*	*12-101*
ALP	*532*	*18-214*
TBIL	*0.14*	*0.00-1.00*
CHOL	*229*	*100-330*
GGT	*<5*	*0-7*
AMY	*511*	*500-1400*
LIPA	*79*	*0-155*

Table no. 2

Medical analysis bulletin - Blood count (Sara, mestizo, female, 8 years old)

Parameters	*UM*	*Rezults*	*Reference values*
WBC	*10^3 /mm^2*	*11.4*	*6.0-12.0*
Limfocite	*103 /mm2*	*1.5*	*1.0-3.6*
Monocite	*10^3 /mm^2*	*0.7*	*0.1-3.4*
Granulocite	*10^3 /mm^2*	*9.7*	*3-10*
Eozinofile	*10^3 /mm^2*	*0.22*	*0.00-0.60*
Limfocite	*%*	*13.2*	*0.0-100*
Monocite	*%*	*2.0*	*0.0-100*
Granulocite	*%*	*84.8*	*0.0-100*
Eritrocite	*10^6/mm^3*	*7.18*	*5.50-8.50*
Hemoglobina	*g/dl*	*19.4*	*15.0-20.0*
Hematocrit	*%*	*49.3*	*44.0-57.0*
MCV	*µm3*	*69*	*60-77*
MCH	*Pg*	*27.0*	*17.0-26.0*
MCHC	*g/dl*	*39.3*	*31.0-38.0*
RDW	*%*	*14.8*	*14.0-17.0*
PLT	*10^3/mm^3*	*322*	*200-4460*
MPV	*µm^3*	*8.3*	*6.7-11.1*

The blood tests are without significant changes, the only change that is taken into account is at the biochemical level and is represented by ALP (alkaline phosphatase), this frequently increases above the maximum value in biliary, bone diseases and last but not least in neoplastic diseases.

Radiological interpretation: at the level of the cephalic area, a radiopaque area is identified that occupies the entire left nasal and sinus area (figure 2), this usually indicates an accumulation of liquid or a densification present at this level; at the level of the thoracic area, obvious bronchial and vascular ectasia is observed, especially on the diaphragmatic lung lobes, together with a reduced radiopaque area located ventrally (thin layer of liquid) and heart with a globular appearance, more obvious on the right side (figure 4), it is not identified nodular formations/lesions located in the lung, thoracic appearance frequently encountered secondary to obstructions/occlusions located in the prethoracic.

X-ray was the most widely used diagnostic imaging method of nasal cavities, before the advent of computer tomography (CT) or magnetic resonance imaging (MRI), being used for radiotherapy (Gieger et al. 2008, Agthe et al. 2009, Drees et al. 2009, Cohn 2014, Lux et al. 2017). CT is superior to

radiography for the diagnosis and staging of nasal cavity neoplasms (Mortier J. R., Blackwood L., 2020) and MRI is the most sensitive method for identifying cerebral involvement (Drees et al. 2009).

Fig. 1. ***Cranial X-ray, latero-lateral incidence***

Fig. 2. ***Cranial X-ray, dorso-ventral incidence***

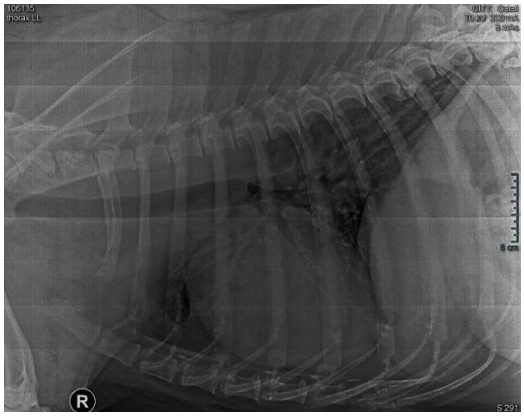

Fig. 3. ***Chest X-ray, latero-lateral incidence***

Fig. 4. ***Chest X-ray, ventro-dorsal incidence***

According to data from the specialized literature, radiography of the nasal cavities is no longer the preferred imaging method for the diagnosis and staging of nasal neoplasms, in order to apply radiotherapy.

Following the paraclinical investigations and the presumptive diagnosis of nasal neoplasm, the dog was recommended the following treatment:

➢ Cardalis (Benazeprilum HCI and Spironolacton) 10 mg/80 mg - 1 cpr. morning;

- Oncovet I (dietary supplement indicated in oncological conditions) – 2 tablets in the morning, 2 tablets in the evening;
- Hedylon (prednicorton) 25 mg, 1 cpr/day, for 3 days, ½ cpr/day, for 3 days, ¼ cpr/day, for 3 days.

The patient's clinical signs (on 19.01.2022) were: reverse sneezing (frequent), mouth breathing - mainly at night, he had colorless liquid nasal secretions (serous jet), never had a yellowish/greenish appearance.

Appetite present, she is energetic, but she is not rested because of nocturnal dyspnea, sometimes she recovers during the day when her breathing is not dyspneic. As a result of the lack of certainty of the diagnosis and the health status of the female dog, the owners requested specialist help from the Spiru Haret Faculty of Veterinary Medicine Clinic Bucharest (19.01.2021) - for guidance and coordination, and the following additional investigations were recommended:

- Cardiological examination (clinical examination, electrocardiogram - ECG and cardiac ultrasound) - for anesthesia for rhinoscopy;
- Endoscopy - Rhinoscopy (mediated inspection - for the morphological aspect of the examined area, as well as for biopsy for histopathological examination).

The result of the cardiovascular examination (25.01.2022) indicated a heart rate of 119 beats per minute, a respiratory rate of 35 breaths per minute, body weight score 4 (1 to 5), pink mucosae, capillary refill time - TRC<2 seconds, pulse – normal, heart auscultation – normal sinus rhythm and respiratory arrhythmia, lung auscultation – normal, jugular veins – were not distended, blood pressure is 140 mmHg (using the Doppler technique – ulnar artery), ECG – sinus respiratory arrhythmia, cardiac ultrasound – without changes).

Interpretation of the results reveals a heart within normal structural and morphological parameters for the race, age and weight of the patient.

The cardiologist's recommendations were that anesthesia can be performed with careful monitoring of hemodynamic parameters. Discontinuation of Cardalis administration, blood pressure monitoring and urine summary and UPC report (urea, potassium, creatinine) and endocrine analyzes (tables no. 3 and 4).

Table no. 3

Medical analysis report – Urine summary (Sara, mestizo, female, 8 years old)

Parametrs	*Rezults*	*Value*
Blood	*10*	*neg.*
Urobilinogen	*-*	*neg.*
Bilirubuna	*+*	*neg.*
Protein	*neg.*	*neg.*
Nitrit	*+*	*neg.*
Ketones	*neg.*	*neg.*
Ac. Ascorbic	*+*	*neg.*
Gluc	*neg.*	*neg.*
ph	*7.0*	*7.0-8.0*
Leucocite	*neg.*	*neg.*

Table no. 4

Immunology bulletin – T4 + TSH

Parameter	*Unit of measurement*	*The value obtained*
Tiroxina (v-T4)	*µg/dl*	*1.00*
TSH (thyroid stimulating hormones)	*ng/ml*	*<0.25*

*Interpretation – T4<1.3 µg/dl and TSH<0.5 ng/ml = below normal, most likely non-thyroid.

Endoscopic examination - rhinoscopy technique (15.01.2022). Following the rhinoscopic examination, the following were visualized:

- numerous formations of large sizes that completely occupy the nasal meatus on the left side.

Following the endoscopic examination, the following investigations were recommended:

- histopathological examination;
- CT examination;
- +/- surgical intervention.

The definitive diagnosis following histopathological examination (30.01.2022) was established as: well-differentiated nasal carcinoma and lymphoplasmacytic rhinitis.

The anatomical-pathological (histological) examination is the diagnostic method that establishes with certainty the nature of the lesion, following the guided nasal biopsy (rhinoscopy) (Harris et al. 2014).

After establishing the diagnosis of certainty, the owners were informed of the prognosis (3-6 months without treatment) and the additional investigations/treatment (Computer Tomography - CT, radiotherapy, chemotherapy/surgical intervention) to which Sara will have to undergo, but for material reasons/distance (resides in the province - 250 km from Bucharest) Sara's owners could no longer support these "interventions" and symptomatic palliative treatment was continued.

Recommended palliative symptomatic treatment:

- Dermipred* (prednisolone) – 20 mg, ds. int. 2 cps./day (morning), for 5 days, after 1 cps./day, for 5 days, followed by 1 cps./48 hours;
- 2. Therios *750 mg (cephalexin), ds. int. 1 cpr. at 12 hours, for 10 days/monthly;
- 3. Onsior* 40 mg (robenacoxib), ds. int. 1 cpr./day for 12 days, administered in the evening, then Piroxicam 40 mg/day;
- 4. CroniCare oil* (medicinal hemp and essential acids), ds. int. 40 pic./day, without a break, administered for a long period of time;
- 5. Shitake* (with lieutenant), Rev. int. 1 cps./day, administered for a long period of time;

*commercial product.

NSAIDs have been commonly used for the treatment of nasal tumors both for reducing the inflammatory reaction that often accompanies nasal tumors and for their anti-COX-2 activity. COX-2 is expressed in 71 to 95% of canine nasal carcinomas (Belshaw et al. 2011, Cancedda et al. 2015).

Depending on how Sara's condition will evolve, Bruxicam 0.5% (ophthalmic solution) and Emofix (nasal ointment for possible nosebleeds) were also recommended.

Treatment of nasal tumors includes radiotherapy, surgery, chemotherapy and combined treatments (Evans et al, 1989; Hahn et al, 1992; Henry et al 1998, Holmberg et al, 1989).

The average survival time of patients without treatment is 3-6 months (Holmberg et al, 1989; Thrall, 19833).

Sara's state of health fluctuated a lot, from periods of dyspnea that alternated with periods of partial remission (02.01.2022 to 02.25.2022), following treatment according to previous recommendations.

From 25.02.2022, it was recommended to supplement the treatment with Rx vitamins* Onco Support powder, administered in food, 2 measures/day, throughout the animal's life.

After supplementing the treatment with Onco Support*, Sara's general condition improved considerably after about 14 days, the periods of nocturnal dyspnea reducing considerably, reaching up to 6-8 hours of rest in some nights even more.

Sara's state of health was "good" for the previously established certainty diagnosis (nasal carcinoma), it lasted approximately 5 months (15.03-05.08.2022), during this period the female dog fed herself, received the treatment, without having any difficulties in breathing.

From August 5, 2022, Sara's health began to deteriorate continuously, starting with this date, an inflammation appeared in the middle of the nose (between the 2 nasal cones) that extended to the level of the two orbits. The inflammation extended to the ocular level, characterized by blepharitis and pseudoptosis, with reduced ocular secretions. Visual acuity decreased a lot, secondary to blepharitis and local inflammation, the animal starting to bump into objects in the environment.

According to specialized literature, the neoplastic lesion can be unilateral or bilateral and can progress to facial deformity, associated with exophthalmos and neurological signs such as seizures and behavioral changes (Northrup et al. 2001, Weeden & Degner 2016).

Nasal carcinoma can evolve differently from patient to patient, having predominantly the same mode of development and action, similar to the present study, and sometimes even affecting the central nervous system, resulting in neurological damage (Northrup et al. 2001, Weeden & Degner 2016).

Symptomatic treatment was applied (a period of 3 weeks) which included the administration of steroid anti-inflammatory drugs (prednicortone -20 mg, adm. 2 times/day), general antibiotic therapy (cephalosporin - Therios 1 cpr., adm. 2 times/ day) and local antibiotic therapy (ophthalmic ointment with kanamycin sulfate 1%). After applying the treatment, approximately two days later, the blepharitis and local edema reduced considerably, Sara started to stop bumping into the things around her.

In the last 5 days of Sara's life, she no longer "responded" to the treatment, the inflammation exceeded the eye area, including the entire nasal sinuses, manifested by blepharitis and pseudoptosis of the upper eyelid, the result being the lack of visual acuity (figure 5, 6, 7, 8).

Fig. 5

Fig. 6

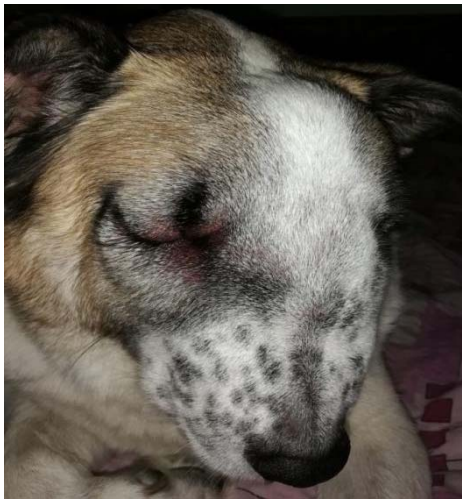

Fig. 7

Fig. 8

Conclusions

Palliative treatment can be applied in situations when histopathologically diagnosed neoplastic conditions do not have a rapidly expanding character and tend to become chronic.

According to the present study, the palliative treatment can lead to an improvement of symptoms and a prolongation of life up to 12 months, according to data from the specialized literature, the average survival rate without treatment in these cases is 3-6 months.

In such situations when the owners cannot afford a specific allopathic medication, radiotherapy or a surgical intervention, the palliative treatment

remains a compromise solution and in some situations with quite good results.

References

1. Belshaw, Z., Constantio-Casas, F., Brearley, M. J., et al., (2011) COX-2 expression and outcome in canine nasal carcinomas treated with hypofractionated radiotherapy. Veterinary and Comparative Oncology 9, 141-148.
2. Cancedda, S., Sabattini, S., Bettini, G., et al., (2015) Combination of radiation therapy and firocoxib for the treatment of canine nasal carcinoma. Veterinary Radiology and Ultrasound 56, 335-343.
3. Evans SM, Goldschmidt M, McKee LJ, Harvey CE., (1989) Prognostic factors and survival after radiotherapy for intranasal neoplasms in dogs: 70 cases (1974-1985). J Am Vet Med Assoc; 194: 1460-1463.
4. Finck, M., Durand, A., Hammond, G., et al., (2015) Evaluation of the ventro 20° rostral-dorsocaudal oblique radiographic projection for the investigation of canine nasal disease. Journal of Small Animal Practice 56, 491-498.
5. Hahn KA, Knapp DW, Richardson RC, Matlock CL., (1992) Clinical response of nasal adenocarcinoma to cisplatin chemotherapy in 11 dogs. J Am Vet Med Assoc; 200: 355-357.
6. Harris, B. J., Lourenço, B. N., Dobson, J. M., *et al*., (2014) Diagnostic accuracy of three biopsy techniques in 117 dogs with intra-nasal neoplasia. *Journal of Small Animal Practice* 55, 219-224.
7. Henry CJ, Brewer Jr. WG, Tyler JW, Brawner WR, Henderson RA, Hankes GH, Royer N., (1998) Survival in dogs with nasal adenocarcinoma: 64 cases (1981-1995). J Vet Intern Med; 12: 436-439.
8. Holmberg DL, Fries C, Cockshutt J, Van pelt D., (1988) Ventral rhinotomy in the dog and cat. Vet Surg 1989; 18: 446-449. 12. Knapp DW, Richardson RC, Bonney PL, Hahn K. Cisplatin therapy in 41 dogs with malignant tumors. J Vet Intern Med; 2: 41-46.
9. Mellanby, R. J., Stevenson, R. K., Herrtage, M. E., et al., (2002) Long-term outcome of 56 dogs with nasal tumours treated with four doses of radiation at intervals of seven days. Veterinary Record 151, 253-257.
10. Mortier J. R. , Blackwood L., (2020) Treatment of nasal tumours in dogs: a review. Journal of Small Animal Practice. Vol 61.
11. Northrup, N. C., Etue, S. M., Ruslander, D. M., *et al*., (2001) Retrospective study of orthovoltage radiation therapy for nasal tumors in 42 dogs. *Journal of Veterinary Internal Medicine* 15, 183-189.
12. Sones, E., Smith, A., Schleis, S., *et al*., (2013) Survival times for canine intranasal sarcomas treated with radiation therapy: 86 cases (1996-2011). *Veterinary Radiology and Ultrasound* 54, 194-201.
13. Thrall DE, Harvey CE., (1983) Radiotherapy of malignant nasal tumors in 21 dogs. J Am Vet Med Assoc; 183: 663-666.
14. Weeden, A. M. & Degner, D. A., (2016) Surgical approaches to the nasal cavity and sinuses. *Veterinary Clinics of North America. Small Animal Practice* 46, 719-733.Yoon, J. H., Feeney, D. A., Jessen, C. R., *et al*., (2008) External-beam Co-60 radiotherapy for canine nasal tumors: a comparison of survival by treatment protocol. *Research in Veterinary Science* 84, 140-149.

OBSERVATIONS ON THE HABITAT RELATIONSHIP – HOMEOSTASIS IN PETS

Arpad SALLAY
Spiru Haret University,Faculty of Veterinary Medicine,
256 Basarabia Ave., 30352, Bucharest
e-mail: sallay.arpad@spiruharet.ro

Abstract

The behavioral and temperamental changes of the subjects under the influence of various environmental factors imposed by the habitat were studied. The objectives pursued referred to the interrelation of the patient's individuality with the disease etiopathogenesis under the influence of the delimited habitat exemplified by the block room or apartment and the semi-eliminated habitat presented in the form of hall, paddock or enclosure. The purpose of the paper was to target animal welfare by targeting housing-feeding conditions and their effects on the homeostasis of the patients studied. The data are the subject of the license paper entitled: „Habitat influence on genitourinary and digestive pathologies in dogs".

Keywords: *behavioral, habitat, homeostasis*

Material and Method

The patients came from rural and urban environments, aged between 9 months and 14 years, male and female, both sterilized and unsterilized. The clinical observations concerned behavioral, temperamental changes and the evolution of the state of suffering under the influence of environmental conditions. References were made to digestive pathologies: Periodontitis complicated with abscesses, thatre deposits, gingival hyperplasia, diarrheal syndrome, digestive malabsorption syndrome, pancreatitis and liver failure, genitourinary pathologies, uremic syndrome or cystitis. For the first stage of the study, 62 cases were observed.

Main and complementary examination techniques were applied with a role in the detection of behavioral and temperamental, clinical and paraclinic manifestations under the influence of the environment and partially of the semiological conditions imposed by the activities within the veterinary offices. Close-up or remote clinical observation was the main mandatory examination method by which it was possible to catalog clinical ethological expressions under different etiopathogens and environmental conditions.

The environment within the work was represented by the following geographical elements or built surfaces: Habitat or delimited environment (apartment room, paddock, hall) and semi-eliminated habitat (yard, pastures, semi-enclosed green spaces around households, spaces arranged for pets).

The rest of the main mandatory methods – palpation, listening,

percussion and thermometry were used in the examination, along with the complementary methodology, with a role in establishing the diagnosis for sick subjects. The complementary methodology used in this paper has played a role in confirming the diagnosis [1,2].

In order to identify the influence of habitat on the subjects under discussion, we examined under the same environmental conditions and subjects giving us the comparative possibility between the reaction of the sick body and the healthy one.

Results and discussion

The physical well-being of patients can be affected by factors such as poor maintenance, suffering or various disabilities induced involuntarily by owners, less by the environment. Among these we mention: Keeping by binding, giving the animal a very small space of movement; granting a space delimited - speaker, devoid of light and with wet microclimate; padoc-without shelter - cover floor, shade or cage. These factors induce conditions prior to suffering or may alter behavior, which in turn increases the risk of contracting a disease or various injuries [2,4].

The mechanisms of disease, in terms of medical algorithm, are different and dependent on the etiopathogenesis of the disease. For example, sedentary behavior leads to weight gain, in turn triggering hypertension and metabolic disorders (hypercholesterolemia and increased triglycerides). Finally, the decompensated form of homeostasis explains the occurrence of heart disease and cardiorespiratory insufficiency. Protein nutritional imbalance can induce the increase of catabolic residual factors (urea, creatinine) triggering the occurrence of clinic due to their retention. Later, renal syndrome may result in decompensation of homeostasis. Immunosuppression or immunodepression develops periodontitis, which is also maintained by improper feeding, explaining the appearance of tartar, gingivitis or dental abscesses). Increased carbohydrates and fats in food under the influence of the environment (high temperatures and lack of water) can induce hepatopancreatic stresses, which maintained under specific etiopathogenetic influence can trigger subclinical or clinical hepatic or pancreatic insufficiency [2, 5].

The imbalance of diet through the influence of nutritional factors on the body is mainly associated with digestive pathologies, secondary having resonance in the disorders of basal metabolism expressed by increased body weight (obesity) or decreased weight (cachexia). Imbalances in nutritional ducks by increasing the consumption of animal fats and decreasing the intake of plant fibers, maintained by inappropriate (imposed) environmental conditions, can be triggers for obesity. Vitamin-mineral imbalances and

excess protein appear to play a role in the occurrence of genitourinary suffering, triggering kidney suffering (renal failure, urea retention, etc.), maintained and exacerbated over time through favorable and determinant factors of the environment such as cold, moisture, confined space, etc.

The disease of the organism under unfavorable conditions of the surrounding environment obliges to apply the therapeutic procedure, taking into account three major coordinates: Etiological, pathogenetic and symptomatic. Etiological therapeutic protocol mainly aims to interrupt contact with the causative agent by applying different ways consistent with the situation in question, such as: Removing the body from the harmful environment; reducing the etiological agent by gastric washes and causing vomiting (digestive pathologies); discontinuation of exposure during treatment to determinants and environmental factors that may maintain etiological aggressiveness; administration of an antidote or other methods with a role in etiological therapy [2, 6]. The treatment works at certain links of the pathophysiological stages in close connection with the reactions induced by the environment through determinants, favoring or predisposing factors. Symptomatic treatment is most often applied within pathologies, the detection of etiological agent requiring the application of the specific therapeutic protocol, mandatory in modulating the dynamics of suffering with the purpose of improvement or healing [1, 4].

Conclusions

1. The clinical study referred to the interrelationship of the patient's individuality with the disease etiopathogenesis under the influence of environmental factors or habitat.
2. Behavioral and temperamental changes of subjects under the influence of various environmental factors or habitat have been identified.
3. The effects of the delimited habitat (apartment room) or semi-eliminated (hall, paddock, enclosure) on the health of the pet can be determined and modulated to the extent of maintaining homeostasis.
4. The clinical trials, taking into account the conditions of care and maintenance on animal welfare, concerned two main situations: In the first, good housing conditions but with poor animal welfare, and in the other situation, the health and welfare of the animals was optimal, but inadequate accommodation conditions.
5. The 62 cases were taken into the study, of which 8 were representative for the work. The patients came from rural and urban environments, aged between 9 months and 14 years, male and female, both sterilized and unsterilized.

6. The clinical observations concerned behavioral, temperamental changes and the evolution of the state of suffering under the influence of environmental conditions.
7. References were made to pathologies such as: Periodontitis complicated with abscesses, thatre deposits, gingival hyperplasia, diarrheal syndrome, digestive malabsorption syndrome, pancreatitis and liver failure, genitourinary pathologies, uremic syndrome or cystitis.
8. The physical well-being of patients may be affected by factors such as poor maintenance, suffering or various disabilities induced involuntarily by owners, less often by the environment.

References

1. Sallay A., (2022). *Course Notes – livestock and Health Management*.
2. Sallay A,. (2006). *Clinical manifestations of headache in various diseases in the dog*. Summary volume. Scientific session of teachers and students, April 18, F.M.V . "Spiru Haret", Bucharest, 29.
3. Sallay A., Bardan, S., (2008). *Spectators referring to recidivist aggressive behavior in Rottweilers*. Annals of Spiru Haret University. Veterinary Medicine Series, No. VIII, 94-98.
4. Sallay A., (2008). *Observations of peripheral facial paralysis in the dog*. Clinical case. Summary volume. Scientific session of teachers and students, May 15, F.M.V. "Spiru Haret", Bucharest, 69-70.
5. Sallay A., (2008). *Clinical manifestations of headache in hepatobiliary pathology in the dog*. Summary volume. Scientific session of teachers and students, May 15, F.M.V. "Spiru Haret", Bucharest, 71-72.
6. Sallay A., Dinu C. (2008). *Observations on clinical manifestations of headache in hemodynamic disorders induced by cardiopathies.* Public support within the circle of Pathology and Medical Clinic – Pathology