Diagnosis of the Dogs Prostatic Diseases

Alexandru Șonea¹, Liviu Vintila¹, Ioana Hașegan¹

¹USMVB – Bulevard MARASTI, nr. 59, București, romania

Abstract
Abdominal ultrasound provides information about shape, size and position. Lumbar vertebrae radiography for revealing possible bone metastases. Urethrograme contrast revealing cysts. Ultrasound can provide information about prostate ecogenity parenchyma lesions and can identify any prostate. To obtain cellular material for cytological and microbiological examination is performed by massaging the prostate and urethral catheterization.

Keywords: dogs, diagnosis, diseases, prostate.

Digital rectal exam - the first test which is performed and the indication to first contact with the patient [1].
Examination depends on the experience of the examiner, therefore has a large load of bias, and always fails stages T1. For palpable tumors, Active imaging methods, digital rectal exam substandial lesions. False positive results can also be induced by prostate adenome, Granulomatous prostatitis, prostate stones, chronic prostatitis, etc. Early prostate cancer detection, diagnosis and appropriate therapy for each patient diagnosed in order to decrease mortality from prostate adenocarcinoma. One of the best diagnosis method is abdominal ecography, urography, cystoscopy.
Prostate diseases such as prostate hyperplasia, prostatitis bacterial paraprostatics cysts and prostate adenocarcinoma, have the effect of inflammation, pain on urination and defecation and causal and abdominal discomfort, fever, leading to the final effect as infertility. Abdominal ultrasound provides information about shape, size and position. Lumbar vertebrae radiography for revealing possible bone metastases. Uretrograma contrast revealing cysts. Ultrasound can provide information about prostate ecogenity parenchyma lesions and can identify any prostate.

To obtain cellular material for cytological and microbiological examination is performed by massaging the prostate and urethral catheterization [1].
Abdominal ultrasound echography provides information about shape, size and position. The objectives of diagnosis are:
• study on prostate cancer early detection, diagnosis and appropriate therapy for each patient diagnosed in order to decrease mortality from prostate adenocarcinoma;
• increase the accuracy of laboratory diagnosis of prostate cancer tumor markers in diagnosis of urinary uPM3 and the proportion of cases of adenocarcinoma in the early stages of disease;
• analysis of diagnostic concordance between prediction methods known serum - detection of PSA and urinary tumor markers - uPM3;
• conducting investigations imaging - ultrasound prostate biopsy transrectala and points;
• application of curative methods in prostate adenocarcinoma patients diagnosed at an early stage (laparoscopic prostatectomy);[4]
To obtain cellular material for cytological and microbiological examination is performed by massaging the prostate and urethral catheterization. Material is sucked in through a catheter lumen also collect fraction ejaculation. Another method of suction aspiration transdermal prostate method is the prostatic parenchyma with a

*Corresponding authors' Alexandru Șonea
fine needle. For prostatic fluid comes in a reflex in the urine, urinary tract infection with bacteria of stupidity is present. Microbiological examination of the third fraction of the ejaculate of the prostate is more likely to identify prostate infections. Vacuum prostate gland is made with a thin needle transrectal or percutaneous, with or without ultrasound guidance. Biopsy is the most likely diagnosis is the most effective and the most invasive. Biopsy is the diagnostic technique used to end the dispute between identify prostate diseases and is a safe and well tolerated technique. Complications were reported consecutive biopsy guided by ultrasound, can be expressed by bleeding and peritonitis. Needle aspiration biopsy is long needle is inserted into the angle of 45° and is held 10 seconds and the transition is the movement of 8-10 times before being withdrawn, the content being examined histologically. Another method for diagnosis is radiological methods [2].

Science radiology became part of the first film after the first exposure to radiology. Ability to process computer data, was applied to a wide range of imaging procedures such as fluoroscopy, computed tomography, scan, MRI. Upward trend of technology has made diagnostic possibilities beyond traditional veterinary diagnosis. Besides radioiodine, ultrasound has become increasingly popular. It required a minimum understanding of the physical processes involved, to achieve a quality X-ray examination. Radiograph is high frequency electromagnetic radiation, radiation produced by electron bombardment of a tungsten target, resulting in the collection of photons of different energy. Radiation passes through tissue and is absorbed by passing the fluids, organs and tissues, photons Ag ions are present in the X-ray photographic emulsion. Need some essential steps to get a diagnostic radiology and ultrasound, which begins with an initial evaluation and recognition of valuable information for obtaining radiographs. Interpretation may lead to a specific diagnosis, but also to obtain detailed information based on patient history, to make a differential diagnosis. Obtaining a diagnostic ultrasound requires completion of several steps, examining the size, shape, position, ecogeneity, homogeneity, data will be compared with radiography. Radiograph provides excellent anatomical information but limited in recognizing certain conditions such as the liver, which X-ray cannot identify. Currently ecographic advanced techniques are used, it is ultrasound with Doppler, which provides data about the circulation in the area examined, but 3D ultrasound, which offers a three-dimensional images of organs. Radiation technique should be executed taking into consideration factors that will help us in obtaining a radiograph of call, such as animal size, size of area considered, animal training, correct positioning of its X-ray intensity control to obtain a tissue penetration as. In order to obtain good ultrasound, the veterinarian must be knowledgeable about normal and pathological anatomy, about artifacts that may occur during the test, ultrasound setting [1].

Aspects of normal ultrasound anatomy and radiology

The abdomen is limited dorsal column caudal to the pelvis, lateral and ventral body, and cranial to diaphragm. The column is sublombar ventral muscle and psoas muscle. Sublombar muscle extends from the column, side-lumbar junction toraco to the pelvis. Psoas muscle and abdominal muscles can be examined because of their ecogeneity. Prostate Examination

The prostate is positioned caudal to the bladder and completely surrounds the urethra. Normal prostate does not extend to the pelvis skull. Cryptorchidism breeds does not extend to the pelvis skull. Cryptorchidism is seen in races pelvis skull of a part of the prostate, and when the bladder is relaxed can be drawn in cranial position. The best position of the probe for examination is the examination of lateral or perpendicular to the imaginary line drawn from the edges of the cranial sacrum promoter of pubic bone. A normal prostate should be at 70% of this distance. The dog prostate is positioned caudal to the bladder, sometimes easy to examine, for identifying first bladder in the transverse plane then watching to move caudal bladder. Prostate normal is heterogeneous, bilobates, round and around bladder neck or urethra. Urethra and regional channels can hipoecogenity structure, round or linear. The prostate is difficult to examine if they are in position intrapelvica, but by leaving it rectal pelvic canal. [2]
**Principles of diagnostic ultrasound**

Diagnosis ultrasound use high frequency that produces the image examining body. Sonic waves have a greater than 20 kHz frequency exceeds the barrier of perception and human Sonica. For diagnosis requires a frequency between 2-15 kHz. Sonic waves are mechanical energy, with an average spread needs producing molecules move. Each tissue has an acoustic impedance that is resistant transmission sound. The fundamental principle of diagnostic ultrasound is that sonic waves passing the tissue examined and are then reflected, and absorbed refarctate. Reflection is responsible for producing the image, as reflected sonic waves, depending on the size and frequency structure reflected waves. Refraction is changing directiei sonic waves when passing from one medium to another, where speed is different. Crossing where they are refracted in a different direction, angle fraction being different, so the image structure may be different than in reality and creates confusion. The production of ultrasound is made of physioelectric crystals, conductor Electricity in making sound and sound energy to return. The peculiarity of these crystals of ceramics is as high temperature electrical properties develop. Frequency sound production is known as pulse repetition frequency and depends on the time used the ultrasound wave to return. [2]

**Pathological aspects of prostate ultrasound**

Focal parenchymal lesions are characteristic of smooth-walled cysts intraprostatice and liquid content, the crecuta in prostate volume and asymmetric. Abscess or prostate tumors may have this ecostuctura. Diffuse parenchyma occurs if benign prostatic hypertrophy, prostate cancer with increased issue with hipercogenity, inflammatory processes. In chronic prostate inflammation density is high and hiperecogenity. If prostate tumors is increased in volume and irregular areas of hiperecogenity [2].

Pelvic computed tomography for tumor addresses to receive and metastatic adenopatiei side, and abdomen, chest and skull metastasis detection [4]. Adenopathy sensitivity for detecting cancer is 50-75% and specificity of 86-100%, the diagnostic accuracy of 83-92%. The limits of that method reside adenopatia is appreciated only in terms of size of lymph, with the possibility of false-positive inflammatory adenopathy or reactive or falsely negative in early stages of lymphatic dissemination. TC is lower transrectal ultrasound and MRI-transrectal prostate for tumor diagnosis [4].

Magnetic resonance allows the study of anatomy that differentiates intraprostatice good soft tissue structures. NMR transrectal entered as first-line method in staging prostate cancer clinics have access to the method accurately and forced extension of the tumor and the incision local neighborhood structures. CT in staging is less adenopathy metastatic cancer, and ultrasound superior transrectal in prostate tumor staging.[4]

Pelvic lymphadenectomy remains the safest technique for assessing pelvic cancer adenopatiei prostate cancer. The objectives consist in removal of lymph stations 1 and 2, so their shutters and iliac and histological examination with confirmation or rejection of lymphatic dissemination.[4]

Intravenous urography, once the investigation in that it was and only, exceeded the modern present, not the Loire in the early stages of the disease. in late stages shows cervical prostate obstruction which may cause distension.

Bone scintigraphy with 99Tc-methylene diphosphonic is more accurate investigation for diagnosis of bone metastases of prostate cancer. False-positive results are less than 2%. Scentigrams bone metastases objectified with conventional X-rays before 9 months. False-positive results are attributed et disease, bone cancers primitive arthritic degeneration and previous injuries, especially to the coastal zone.[4]

Bone biopsy is a method rarely used in recent times, but very informed. To meet cases where all other methods do not bring home diagnosis of bone metastases, bone points rezolta dilemma is that emphasize the origin of prostate cancer cells. It is useful where the diagnosis is uncertain, and the differential diagnosis of bone diseases that may mimic lesions of meta-static type. [3]

**Tumor markers:**

- PSA - prostate specific antigen, is a gicose-protein with molecular weight 33000, secreted by prostate cells cytoplasm. It was discovered by Wang in 1979. Dispose in semen and blood. Normal values of PSA, it is between 0 and 4 ng / ml. PSA is specific to prostate tissue, and not just prostate cancer. Although serum PSA level is
strongly related to clinical and pathological disease Ansara, he alone can be useful in staging, because the levels, sometimes identical to the different stages of disease. PSA level depends on prostate tumor volume (Stamey 1987), but is influenced by other factors.

PSA values are influenced by the coexistence of prostatic adenoma. Stamey made a correspondence between the amount of adenomatous tissue and the Loire PSA, showing that for every gram of adenomatous tissue, PSA increase of 0.3 ng. Other measurements have shown the correspondence of 1g = 0.15 ng. because PSA is produced by epithelial component of the adenoma, means that there will be differences in growth depending predominant PSA stroma or epithelium in prostatic adenoma structure. Bias et al. (1990) showed less increase of PSA if bulky tumors, or anaplastic tumors with high and increasing PSA levels higher in well differentiated tumors. As general guidance, Lori of PSA below 4 ng / ml occurring in 70-80% of patients with intracapsular cancer, over 50% of patients with PSA above 10 ng / ml had capsular penetration, and over 75% of patients with Lori's PSA over 50 ng / ml tumor adenopathy present. Lori Stamey shows that less than 10 ng / ml are characteristic of cancers without neoplastic adenopathy. PSA can be used alone for staging, because of overlapping Lori in various stages of the disease, which is due to influence factors presented above.

PSA is a marker of utmost importance for the evolution of disease after radical prostatectomy, so the target oncological surgery. Postoperatively, PSA levels drop to 0 suggests removal of the prostate cancer oncology. If the level does not decrease to 0, is suspected neoplasm prostate tissue remaining. Increased PSA mean tumor relapse after surgery in 40% of local cases and 60% of cases limfoganglionary and or cancer. PSA must have the same evolution after radiotherapy with intent clean, made in the early stages of the disease. The decrease in the level 0 suggest efficacy, while increasing levels suggest radiotherapy after local recurrence or distant.

The possibility that a suspect lesion in rectal examination be confirmed to be prostate cancer varies between 35 and 50% of cases. This is due to many injuries which may mimic the appearance of neoplassia. Thus, differential diagnosis must be made to:

• prostate adenoma - has symptoms vary over time, the prostate is the characters described in the previous module, hematury is rare frecvent respond to drug therapy and hormonal or alpha blockers. Radiology, obstruction and distension supracala will always be symmetrical, unlike cancer, where frecnt are asymmetric;

• prostate tuberculosis, is part of Loulé complex urogenital TB, bacillary has past and the evolution of the feature, and is diagnosed by pointing to smear BK, special media or inoculation to guinea pigs;

• Acute and chronic prostatitis, acute is the easiest to diagnose because the signs and rapidly evolving simpto-tion to complete retention of urine, feeling type septic and local prostate is enlarged overall, very sensitive and warm, with signs collection - fluctuenta if the abscedation.

Chronic prostatitis is a differential diagnosis difficult to achieve due to injuries resemblance to digital rectal exam, and clinical and biochemical poverty that accompanies it. It will only histological diagnosis;

• prostate stones - local clinical mimic of prostate cancer, but show the characteristic appearance of limestone of rectal examination, which gives the feeling described by the classic "bag with nuts \". Is easily diagnosed by X-ray and ultrasound PEL-fault, and can coexist with prostate cancer;

• granulomatous prostatitis is a rare clinical entity, but this in sections of Urology, prostate cancer and clinically mimic the differential diagnosis can be made only by histological examination;

• differential diagnosis of metastasis, and mainly of the bone will be dealing with cancer receive the bone lesions, or metastases to other point of departure, its disease, multiple myeloma, osteoporosis of different causes.

Haves as diagnosis recall for bone scan, prostatic markers, PSA and PAP, puncture bone and prostate tumor diagnosis finally get to secondary explain. In final release, you must remember that for sure, no differential diagnosis cannot be without histological examination to prove injury, and not forget that prostate cancer may coexist with any of the above lesions. Without deni terms in instigations, exploratory triad: tuseu rectal, PSA, ultrasound transrectale (+ biopsy ecoguided when applicable) is required for screening to men
over 45 years, or in all cases where a patient be obtained for assumed to be a disease of prostatic origin.[4].

Only your doctor is able to establish the particular disease, but fortunately, thanks to continuing research, there are several treatment options that can talk to your master. Each option has specific advantages that need to know before making a decision. Together with the doctor will determine to what extent the symptoms data were affected quality of life prostate diseases animal. The choice of treatment should be established to keep account of age, lifestyle and diet of the animal. The doctor is able to establish the degree of evolution of disease and recommend treatment depending on the particular animal disease.

Conclusions

After coupled all the results of clinical and preclinical tests conducted, it can get a conclusive result in terms of diagnosis.

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