Vaginal Laparoscopic Ovariohysterectomy in Dogs

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Ovariohysterectomy is the most common of all gynecological operation performed in human beings & in dogs. Until the late 1980s there were two available approaches of performing hysterectomy through laparotomy. In the 1999 Roche et al. reported a new procedure called laparoscopic assisted vaginal hysterectomy (LAVH). Since then laparoscopic hysterectomy has gained widespread popularity with the advances of laparoscopy all over the world. Laparoscopic ovarian hysterectomy surgery with advantages of shorter hospitalization, smaller incision, less adhesion formation, faster recovery from anesthesia in comparison to that of routine conventional methods is the technique of increasingly experiences.

In this study effort has been made to introduce/popularize the technique of the laparoscopic vaginal ovariohysterectomy using pulled based modality of dogs in Iran. The safety and effectiveness of this technique is proven the benefits of laparoscopic vaginal hysterectomy with less pain, less blood loss, shorter operative time, less post operative complication, less surgical site infection, less hospital stay, quicker return to activity. Attempt has also been made to prepare & identify other laparoscopic procedure like rectovaginal, vesicovaginal, para rectal and paravesical spaces.

Key words: Ovariohysterectomy, Vaginal, Laparoscopy, Dog
Complications of the Ultrasound-Guided Needle Biopsy of the Kidney in Dogs

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Percutaneous needle biopsy of the kidney may be helpful in formulating prognoses and treatment plans for some disease of kidney. Ultrasound guidance for renal biopsy improves the efficacy of the procedure. Complications of renal biopsy include hematuria, hemorrhage, infection, local peritonitis and severe circulatory dysfunction. The purpose of this study was to evaluate the accuracy of the technique and the possible complications of biochemical, hematological, radiological, ultrasonographic and pathological changes after ultrasound-guided needle biopsy of the kidney.

Ten adult dogs were used; an 18 gauge Vim Tru Cut biopsy needle was introduced into the cranial pole of the right kidney using sonographic guid. Clinical, ultrasonographic and radiographic, hematological, biochemical and pathological changes were evaluated after biopsy procedure. All the biopsy samples contained renal tissue. Clinical evaluations showed that changes were all within normal reference ranges. Ultrasonographic and radiographic evaluations showed no changes in kidney sizes. The results of hematological and biochemical evaluations showed no statistically significant difference (p>0.05) between blood samples before and after the biopsy. The results of this study indicates that the ultrasound-guided renal biopsy can be safely obtained from healthy dogs using 18-gauge Vim Tru Cut biopsy needle. Our study suggests that ultrasound-guided renal needle biopsy procedure has a minimal complication in normal dogs.

Key words: Ultrasound-Guided Needle Biopsy, Kidney, Dog
Female Pseudohermaphroditism in a Labrador Retriever

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Female pseudohermaphroditism is a form in which the affected individual is genetically female and has female gonads but has significant male secondary sex characteristics. A 6-month-old Labrador Retriever dog weighing 27.0 kg, previously diagnosed and treated for imperforated anus and rectovaginal fistula was referred to the hospital. The owner reported urine dribbling from vulva. Both female and male external genitalia and also a 5×6 cm perineal mass was previously noted. Excretory urography and cystography revealed right ectopic ureter and suspected bladder duplication. After surgical preparation of the patient, under general anesthesia and dorsal recumbency throughout abdominal exploration two ovaries and two uteri each with own cervix were removed, also left ureter marsupialization and perineal mass excision were performed. The heart-shaped bladder was longitudinally divided in two parts by a membranous membrane. Post operation care was injection of analgesia and antibiotic and also evaluation of the incision site. Histology reported normal ovaries containing numerous follicles, scrotum and perineal mass were comprised of epidermis, dermis, collagen and adipose tissue. The case was classified as a female pseudohermaphrodite. She was able to urinate through both vulva and penis with excellent prognosis.

Key words: Pseudohermaphroditism, Labrador Retriever
Abstract

Some Serum Biochemical Alterations after Urinary Diversion in Dogs

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To evaluate some serum biochemical alterations after urinary diversion with colonic segment, two adult healthy mixed breed dogs weighing between 25-40 kg underwent continent urinary diversion. In this approach, twenty centimeters of the descending colon with its mesentery was resected and the segment was opened longitudinally and flushed with copious amount of normal saline. The remaining colon was re-anastomosed with seromuscular sutures. The end of ureters in trigone area was then transected and a mosquito hemostatic forceps was used to draw the ureters into the colon. Simple interrupted sutures were placed between the ureteral wall and the colonic mucosa. The colon transplanted to the partially cystectomy bladder in a cap form with one layer of Cushing pattern suture.

In this study, some serum biochemical alterations such as blood urea nitrogen (BUN), serum creatinine and Ca, P, Na, K, Cl ions were measured before surgery and at the 1, 2, 3, 4, 5, 6, 7, 10, 15, 20, 25, 35 and 45 days after operations.

BUN and serum creatinine concentrations were increased significantly at one week after surgery but decreased to the normal levels gradually. One week after operation, hyperchloremic metabolic acidosis with normal or low sodium and potassium levels was diagnosed in all animals. Hypocalcemia and hyperphosphatemia were significant. The entire serum parameters except calcium and phosphorus regained to the normal levels within one week after surgery. In conclusion, the salt-losing syndrome and metabolic acidosis are the most frequent temporary complications after urinary diversion on colonic segment in dogs.

Key words: Serum Biochemistry, Urinary Diversion, Dog
Ureteral Segment Replacement Using an Ovine Foetal Urethral Duct Xenogenic Graft in Dogs

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The ureter is an important part of the urinary system that can be affected by several disorders such as congenital malformations, extensive intrarenal ureteral obstruction, ureteritis, retroperitoneal fibrosis, trauma, necrosis, calculus, tumors, etc. The purpose of this study was to determine whether ovine foetal urethral duct would be accepted when used as a ureteral replacement in other species.

The ureters of five adult native dogs were approached through a ventral midline laparotomy incision. A segment of 2-cm midureter was resected unilaterally. The left ureteral segments were replaced with ovine foetal urethral duct using 5-0 PDS interrupted sutures. Internal ureteral catheter was left for 6 weeks. The patency of the ureters was assessed by intravenous pyelography (IVP) at 6 and 12 weeks, while inflammation and regeneration were assessed grossly and histologically.

All five ureter transplantation were accepted successfully in radiological, macroscopic and histological evaluation. The ovine foetal urethral duct seems to be an embryonic tissue of extremely low antigenicity and therefore suitable for transplantation.

Key words: Ureter Replacement, Ovine Foetal Urethral, Dog
Evaluation of Hyaluronic Acid (HA) Effects on Healing of Corneal Ulcer

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HA is the prototype of a wide range of saccharide biopolymers (glycosaminoglycans or mucopolysaccharides), important components and water soluble of all extracellular tissue structures, including cartilage and synovial fluid. HA have a high molecular weight and viscoelastic properties that are similar to synovial fluid and suitable and effective material in eye surgery. HA has been postulated to be an important factor in scar reduction in wound healing, because it has anti-inflammatory affects.

Evaluation of HA on corneal ulcer healing (epithelisation and contraction).

10 female rabbits were divided randomly to two groups and were anesthetized by xylazine and ketamine and then right cornea of both groups were trephine 4mm in diameters and an experimental wound was performed. In group one normal saline were dropped and an other group HA, 0.1% were dropped and in 0,3,6,8,12,15,18,21,24,27and 30th, photograph was prepared by fluorescent strip of right corneal eyes of two groups. And then pictures were analyzed by ImageJ software.

Generally, between two groups, corneal wounds didn't have significant difference healing in 0 and 3th days (p>0.05). But in 6th-day until 30th-day, they had significant difference and corneal wound healing by HA is better than normal saline (p<0.05).

HA has a good effective on corneal wound healing acceleration and so inhibition of corneal opacity.

Key words: Hyaluronic Acid, Healing, Corneal Ulcer
Abstract Proceedings 7

ST104-Cell

Harvesting of Bone Marrow Mesenchymal Stem Cells from Living Rat for Different Autologous Cell Therapy Studies

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In bone marrow, there are certain populations of stem cell sources including hematopoietic stem cells, marrow stromal stem cells and multi-potent adult progenitor cells. These multipotent adult progenitor cells which comprise approximately 0.125% of the total marrow cells, are multipotent stem cells with the capacity to differentiate, under specific experimental conditions, into several different types of cells including osteoblasts, adipocytes, chondrocytes, skeletal muscle cells, cardiomyocytes, hepatocytes, neuronal lineages, include neurons and astrocytes, and epithelial cells of the lung and intestinal tract. Ideally, cell transplants would be readily obtainable, easy to expand and bank, and capable of surviving long enough. Indeed mesenchymal stem cells (MSC) have all of these capacities. One of the most important benefits in using MSCs is the possibility of autologous therapy, avoiding graft rejection, the risk of viral antigens, and possible ethical concerns associated with other sources of stem cells.

MSCs were isolated from bone marrow aspirated taken from the femur. Rats were anesthetized with ketamine (75 mg/kg) and xylazine (10 mg/kg) i.m. A small hole (1-1.5 mm) in the femur was created with burr microror and following skin incision (5mm), and 0.5-1 ml of bone marrow was aspirated using a 2 ml syringe with a 21 G needle. Cell suspensions were collected after centrifugation (2,000 rpm, for 15 min) and were resuspended in 2 ml serum-free medium. After centrifugation (1,000 rpm, for 15 min), the cells were suspended in 1 ml NPM. Detection of MSCs was performed with RT-PCR analysis.

Key words: Bone Marrow, Mesenchymal Stem Cell, Rat
Abstract Proceedings

STB092-Oral

A Novel Method in Ear Cosmetic Surgery in Dogs

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The shape of ears is important in dogs due to three aspects: cosmetic, hearing and correction of deformities. Trimming is out of practice at present. This case series introduces a new method to correct shape of ear without major surgery.

Three dogs (German shepherd and Deberman breed) were included. Two of them had unsuccessful previous surgery and one had fracture of the ear cartilage. After induction of general anesthesia, a 3mm incision created on the tip of the ear. A stainless steel wire conducted to subcutaneous area of the ear vertically. Then the second incision was created at the base of ear just below the tragus. Wire was bonded on the tip of the ear and the other end fixed at the base of cartilage. Incisions were closed by 3 single interrupted sutures.

The ear becomes straight just at the end of the operation. Cases did not need any post operative care. Complications such as infection, inflammation or rejection were not seen in the cases.

Splittering with stainless steel wire is a new and novel procedure in cosmetic ear surgery in dogs. It is safe and effective and maybe a substitution for ear trimming.

Key words: Ear Cosmetic Surgery, Novel Method, Dog
Using Ahmed's Gonioimplant Valve to Surgical Treatment of Glaucoma in Two Dogs

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The glaucoma is the increase in intraocular pressure due to some conditions. The disease could classify into primary and secondary glaucoma and also in the state of drainage angle (open, narrow, close). The commonest sign of glaucoma is progressive loss of vision.

An eleven-year-old Golden Retrievers male dog (dog I) and a four-year-old castrated Terrier breed dog (dog II) with partial loss of vision of left eye of dog I and blindness in both eyes of dog II have been referred to the veterinary clinics. Clinical findings and measurement of intraocular pressure confirmed the glaucoma in both dogs.

According to the findings, medical treatment was started to reduce the ciliary body secretion and to increase the drainage rate, immediately. On day 3, surgical treatment was carried out with the same procedures and using of Ahmed's gonioimplant valve AGV 92 and AGV FPR in right eye of dog I and II, respectively.

Post-operative care was carried out with topical and systemic antiglaucoma, anti-inflammatory and antibiotic drugs. Intraocular pressure dropped into normal level, the day after surgery in both dogs.

Using Ahmed gonioimplant (Ahmed's valve) is preferable for long-term treatment of glaucomatous cases.

Key words: Glaucoma, Ahmed's Gonioimplant Valve, Dog
Treatment of Chronic Non-Healing Wounds with Keratin-Gelatin Composite Film in Cats and Dogs

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Chronic wounds are common presentations in dogs and cats. Presence of more inflammatory cells and increased protease enzyme production were the reason for slow healing; thus results in defective remodeling of the extracellular matrix and failure in re-epithelialization. In recent years, the interest is centered towards incorporating stimulating agents of cytokines and growth factors in wound dressing materials to counteract prolonged inflammatory phase. The aim of this study was to evaluate keratin-gelatin composite film, (products of poultry feathers and commercial gelatin) in non-healing wounds. Eleven cats and two dogs having chronic wound for duration of 6-60 days in the ear, base, back, groin, femoral, flank, abdomen, metatarsal, palmar region were treated with 3-4 application of keratin-gelatin composite film with an interval of two days in between the application. Prior to presentation the wounds were treated with one week antibiotics and routine dressing. The wounds were circular, irregular, linear and fistulous in shape and the sizes ranges from 2cm² to 136.6cm². The composite film was easy to apply and well tolerated by the animals. No adverse reactions were noticed. Reddish discharges and shiny red granulation appearance were evident on 3-4 application. Wound healing was good and complete in majority of the cases following 8-8 application. Wound planimetry revealed progress in percentage of epithelialization, contraction and wound healing with positive correlation. This study concludes that composite film containing B-keratin of poultry feathers and gelatin stimulates cytokines and growth factors production which helps in early formation of granulation tissue and wound healing.

Key words: Wound, Keratin-Gelatin Composite Film, Cat, Dog
Biomechanical Comparison of Serosal Patching and Omental Covering in Rabbit Experimental Colotomy

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Healing of the colon is a delayed phenomenon, which may cause lococeleing of the sutures line and leakage of luminal contents into the abdomen, therefore using of serosal patching (SP) and omental covering (OC) are the accepted mechanical reinforcement supports for the colotomy site. This study is designed to compare the tensile strength of the colotomy sites, after serosal patching and omental covering in an experimental rabbit model.

18 male New Zealand white rabbits were divided randomly into three groups and kept in a standard research condition. Colotomy performed on all the animals and surgery site in (SP) group covered with a segment of jejunal antimesenteric surface, in (OC) group covered with a free portion of omentum and in control group (CT) the colotomy sites closed without using any coverage. The intact proximal tissues of the surgical site considered as a Negative control (NCT). Tissue specimens were taken from half of the groups (n=3) in days 14 and 21 and sent for biomechanical evaluation using Tensile strength test.

The biomechanical test results showed an increase in ultimate stress value (stiffness) in serosal patch group compared to omental covering group in the proliferative phase of the colonic healing and means that using of serosal covering on colotomy incision site, provides a better mechanical reinforcement support rather than the omental covering.

Key words: Serosal Patching, Omental Covering, Colotomy, Rabbit.
Laparoscopic Assisted Jejunial Loop Reconstruction after Total Gastrectomy in Dogs

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Total gastrectomy is applied to treat patients with malignant gastric tumors located in the upper portion of the stomach. Although many types of reconstruction of the alimentary tract after total gastrectomy have been reported, the question of which would be the ideal reconstructive procedure for the ability to prevent esophageal reflux and the function of the stomach to retain food are lost. Therefore, a reconstruction method that would both prevent reflux esophagitis and also provide a reservoir function for food in the reconstructed alimentary tract would be highly desirable. Although the Roux-en-Y esophagealjejunostomy has gained the broadest acceptance as a mode of reconstruction, a variety of alternative procedures have also been proposed, offering at least theoretical advantages.

Laparoscopic assisted reconstructive surgery has been well demonstrated to have the advantages of more favorable clinical course, pulmonary function and immune response for treatment of gastrointestinal diseases. Roux-en-Y reconstruction after total gastrectomy is the most useful procedures for improving the postoperative quality of life.

In the present study laparoscopic assisted gastrectomy using jejunal loop interposition as a new method of reconstruction were undertaken in two dogs. Dogs were anesthetized, the abdomen was insufflated with carbon dioxide, and laparoscopic telescope was placed through a cannula inserted on the abdominal midline. Babcock forceps placed through a cannula inserted lateral to the right margin of the rectus abdominis muscle were used to avascularize the pyloric antrum. Stomach was removed through 5 cm minilaparotomy and 15 cm of jejunum was used as a loop instead of the stomach. Clinical and biochemical parameters on days 0, 1, 3, 7, 15 after surgery plus positive contrast gastography on day 15th were used to evaluate the new stomach position and the onset of gastric loop emptying. On Day 15th laparoscopic visualization of adhesion were recorded.

Key words: Laparoscopy, Jejunal Loop Reconstruction, Gastrectomy, Dog
Surgical Pathology: Power of Biopsy

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Good medical practice requires a tissue diagnosis prior to planning and initiating therapy. Surgical pathology is the study of tissues removed from living patients during surgery to help diagnose a disease and determine a treatment plan. Often, the surgical pathologist provides immediate consultation to the surgeon during surgery to help determine the best surgical process. Surgical pathology includes both the physical examination of the tissues with the naked eye, as well as examining processed tissue under a microscope. New techniques of examination of tissue and cell specimens involve molecular diagnostics (DNA/RNA analysis), which involves analyzing DNA and proteins in the blood. Examples of the uses of the technology include the ability to distinguish between benign (non-cancerous) and malignant (cancerous) white blood cells, detecting early genetic changes which may result in cancer, identifying infectious agents in body tissues, diagnose a disease and aid in the development of a treatment plan. Dramatic changes in imaging techniques and biopsy instrumentation have been nothing short of a revolution in veterinary medicine. Whereas formerly histologic evaluation was limited to samples obtained by surgical excision, today, there are additional options of ultrasound-guided fine needle aspiration, ultrasound-guided tumor biopsies, or visually-guided samples obtained via laparoscopy or endoscopy. It is easy to find descriptions of these techniques, but it is not at all easy to find any discussion about what technique is most appropriate for the disease. This article presents the different applicable types of biopsy techniques and choosing the right ones based on the situation.

Key words: Surgical Pathology, Biopsy
Evaluation of Continuous Overlapping (Pneumostatic) Suture Pattern vs Continuous Horizontal Mattress for Suturing of Partial Lung Lobectomy in Rabbit

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According to the literature, there are two suture patterns described for closing the incision line of lung lobectomy, but no comparative study is yet published. This study was performed to compare continuous overlapping (pneumostatic) suture pattern and continuous horizontal mattress pattern. 21 healthy male rabbits with the average weight of 2kg were divided randomly to three equal groups. Clinical, laboratory and radiological evaluations of all animals were recorded before surgery. In two experimental groups under general anesthesia and following lateral thoracotomy through left 5th intercostal space, a wedge shaped piece of 2×2×3 cm from caudal border of left cranial lobe was removed. In one group, continuous overlapping pattern in first row and simple continuous pattern in second row (pneumostatic pattern) were placed with 6/0 polygalaclin 9/H and in the other group continuous horizontal mattress and simple continuous patterns were used in the first and second rows respectively. The third group underwent just left lateral thoracotomy as sham group. Incision line and thoracic wall closure were the same in all rabbits as the control group. After 21 days, hematological and radiological evaluations were done. The animals inspected for gross pathology of intra thoracic adhesion for the size, location and shape after euthanasia and samples were taken for Histopathological study. No statistically significant difference was observed between two experimental groups in terms of adhesions between lung and thoracic wall and between intra thoracic structures. There was no significant difference between three groups in case of clinical, laboratory, radiological and histopathological evaluations. This study suggests that there is no preference for pneumostatic pattern, which leaves more suture materials and takes more time, in comparison with continuous horizontal mattress. In small size wedge resection of lung lobe.

Key words: Suture Pattern, Partial Lung Lobectomy.
Polysonic Kidney in an Adult Persian Cat; Clinical, Diagnostic Imaging, Pathologic and Clinical Evaluations

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In Persian cat, polycystic kidney is an inherited disease as an autosomal dominant trait. Affected Persian cats usually do not develop chronic renal failure until later in adult life (3-10 years; average, 7 years).

An affected 4.5 years old male Persian cat with depression, lethargy and anorexia that were present for two months, was referred to our clinic. Weight loss was one of the problems reported by the owner. In physical examination, palmar mucous membranes, tachycardia and stomatitis were prevalent. Laboratory findings were compatible with that of Chronic renal diseases. In Ultrasonographic examination, right and left kidneys were 4.3×2 cm and 4.3×2.5 cm respectively. Multiple renal cysts were seen in both kidneys. Cysts had thin walls with anechoic contents and strong distal echo enhancement. The cat died after two months probably due to uremia. Necropsy findings showed small locations of haemorrhage in the stomach. Severe stomatitis was also noted. Necrosopic examination of the kidneys showed several cysts in the cortex and medulla of both kidneys. Most of these cysts were filled with fluid. Microscopic examination showed many cysts of 800-2000 μm in diameters. Some cellular infiltrates were also seen in some regions. Intestinal connective tissues were developed around the cysts.

Key words: Polysyntic Kidney, Cat
Extracorporeal Shock Wave Lithotripsy (ESWL) in Dog

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Kidney and urinary tract calculi cause inflammation, infection, hemorrhage and obstruction in the urinary system. These calculi in dogs and cats are rare in kidney, but in urinary bladder and urethra are seen frequently. Small calculi are excreted by urinary flow, but large calculi cause obstruction in the urinary tract. Extracorporeal shock wave lithotripsy is a method for tripping of urinary system calculi by ultrasonic waves. These waves have pulsatile action. Number and energy of shock waves depend on size, shape and composition of calculus.

A 3-year-old mixed breed female dog with hematuria, dysuria and abdominal pain was studied by ultrasonography. Two, nine and 11 mm calculi; increased thickness of urinary bladder wall and echogenic suspended particles in urine were seen. After 2 days the case was referred to lithotripsy department and general anaesthesia was performed. Calculi location and focusing area of shock waves were demonstrated by ultrasonography. 3500 shock pulse with 6 energy unit introduced to the calculi. After 48 hours the particles was not seen in ultrasonography. Urinary bladder wall diameter was 7.5 mm and suspended echogenic particles increased in urine. Administration of systemic anti-inflammatory and antibiotic drugs caused improvement in urinary bladder after 10 days.

Extracorporeal shock wave lithotripsy is an appropriate method for removing the large calculi of kidney and urinary tract. Disadvantages of this method are expensive ness and non-availability in veterinary medicine.

Key words: ESWL, Dog
The First Report of Hepatosarcoma in a Dog in Iran

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Malignant hepatosarcoma was observed for the first time in a thirteen-year-old female American Skitno dog. Clinical signs were anorexia, acute lethargy, and weakness. Abdominal radiography showed a large mass. Laparotomy was carried out in Tehran city hospital center in University of Isfahan to remove the mass. A pear-shaped lobular yellow brownish mass measuring about 15x12x20 cm in size and 530 grams in weight was found in the right hepatic lobe. Microscopic examination revealed two trabecular and solid patterns of neoplastic hepatocytes. There were numerous tumoral giant cells containing one or more large hyper chromatic bizarre-shaped nuclei scattered among clusters of neoplastic hepatocytes. In addition, mitotic figures, dilated sinusoids and large vascular spaces filled with red blood cells were observed in some sections. Based on gross and histopathologic characteristics, the mass was diagnosed as nonmetastatic hepatocellular carcinoma.

Key words: Hepatosarcoma, Dog
Clinical, Clinicopathologic, Ultrasonographic and Histopathological Characteristics of Intestinal Lymphangiectasia in a One-Year-Old Female Dog: Case Report

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Intestinal lymphangiectasia is a pathological dilatation of the intestinal lymphatics accompanied by enteric protein loss, hypoproteinaemia and manifestation clinically by diarrhea, steatorrhoea and signs of malabsorption. Lymphangiectasia may be a primary disorder or can be secondary to lymphatic obstruction. The disease is mostly seen in small terrier breeds (e.g., Yorkshire, Maltese). The purpose of this report is to describe a case of lymphangiectasia in a dog, in which intractable GI signs was the manifestation of the condition.

A one-year-old female intact Maltese with 2 weeks of distended abdomen, vomiting, diarrhea, and anorexia was referred to a private pet clinic in Tehran. At the time of presentation the dog was thin but hydrated and alert. Distended abdomen with fluid wave was evident on physical examination. Laboratory analysis showed panhypoprothrombinemia (TP 2.83g/dl, albumin 0.63g/dl, globulins 2.2g/dl), hypochloremia (99.2 mEq/l) and transaminase in the range of normal. Abdominal ultrasonound revealed ascites with mesenteric lymphadenopathy. According to diagnostic results intestinal lymphangiectasia was the tentative diagnosis proposed.

For definitive diagnosis an exploratory laparotomy was done. Gross abnormalities, including thickened small intestine, dilated lymphatics, and yellow-white nodular masses in and around mesenteric and subserosal lymphatics were found in the intestines. Biopsies were taken from cecum, jejunum and ileum. On histologic examination, ballooning dilatation of lymphatics, lipogranuloma and concurrent inflammation were observed.

A diagnosis of intestinal lymphangiectasia was made on the basis of histological lesions. Therapeutic plan was performed on dietary manipulation and using glucocorticoids. Patient follow up revealed that treatment procedure was excellent.

Key words: Intestinal Lymphangiectasia, Dog.
Clinical Report of Rickets in a Rabbit 5-Month-old Referred to Veterinary Hospital of Ahvaz

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Hypocalcemia in young animals is known as rickets, whereas in adults it is called osteomalacia. Dietary vitamin D is hydroxylated in the liver into 25-OH vitamin D and in the kidney into calcitriol. Rickets is characterized by poor mineralization of newly formed osteoid and cartilage and a thickening of metaphysical areas of bone. High calcium intakes in intestine starting at an early age may cause hypercalcemia, secondary hyperparathyroidism and tertiary decreased calcitriol formation. In this study, a three-month-old female rabbit was referred to veterinary hospital of Ahvaz University with signs difficulty in walking and ataxia. Radiography of limbs and vertebral column demonstrated thin long bone cortices and extremely thickened growth plates. It was significant for diagnosis of rickets. Dietary was changed to the foods are known to contain sufficient vitamin D and calcium to resolve and prevent rickets. Vitamin D3 injected and calcium syrup added to dietary. Mineralization of bone cortices, callus and growth plates occurred within 1 month.

Key words: Rickets, Rabbit
The Coincidental Occurrence of Feline Infectious Peritonitis (FIP) and Mycoplasma haemofelis Infection In a Cat: A Case Report

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An eighteen-month-old female domesticated cat was referred to the Saadat Abad Specialized Pet Animal Polyclinic for weakness, weight loss, anorexia, and dyspnea. The cat was kept in the pet animal boarding house of the clinic for one week. Mild fever, anemia, icterus, cardiac dullness, and severe respiratory distress were observed in clinical examination.

Pleural effusion and ascites was diagnosed by radiographic and ultrasonographic examination.

Pleural and abdominal fluid was taken aseptically. Blood smear was prepared and Mycoplasma haemofelis organisms were observed on the RBCs of the cat.

The following data was obtained from the examination of pleural and abdominal fluid: Total protein of pleural fluid: 2.7 g/dl, total protein of abdominal fluid: 6.7 g/dl (Albumin, 1.02 g/dl) and A/G ratio, 0.15 and abdominal fluid WBC count: 1275/ml. No organism was grown in blood agar and MacConkey media. Smear was prepared from the precipitate of the fluids and stained with Wright staining. Macrophages, lymphocytes and mesothelial cells, non-degenerated neutrophils and fibrin clots were observed in microscopic examination of the smear.

FIP was diagnosed on the bases of history, clinical signs and laboratory findings.

Key words: Feline Infectious Peritonitis, Mycoplasma haemofelis
Concurrent Bilateral Inguinal and Umbilical Hernias in a German Shepherd Bitch

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Hernia is an abnormal protrusion of organ or tissue through a normal body opening. Inguinal ring defect allows abdominal contents to enter subcutaneous space.

A 3-year-old German shepherd bitch with a bilateral swelling in inguinal region (prominent in left side) and a small swelling in umbilical region was referred to Veterinary Teaching Hospital of School of Veterinary Medicine of the Shiraz University. She had dystocia with her 3 poppies 7 months earlier. Clinical examination revealed normal vital parameters and good general conditions. On physical examination, soft, non-painful and reducible swellings were palpated in inguinal and umbilical regions. Under general anesthesia and following preparation of surgical sites, an incision was made over each inguinal canal separately to allow exposure of hernial sac. In left side, the whole uterus along with the broad ligaments and in the right, omentum were contained in the hernia sac. After inspection, small adhesion between uterus and the sac was dissected free. All contents were returned to the abdominal cavity by healing the redundant sac. The sac was trans-ligated and trimmed at the margin of the abdominal ring. The hernial ring sutured with simple interrupted of 0 Vicryl. Enough room was left for crossing of external pudendal vessels and genitofemoral nerve. Subcutaneous tissue sutured with simple continuous of 0 Vicryl to eliminate dead space. Finally, the skin was closed by Beigl 0 in subcuticular pattern. Suture placed on 3 sites immediately after procedure. The umbilical swelling contained some abdominal fat with a small ring. The omentum was returned back and the ring was sutured by polyglactin suture no. 1 using simple interrupted pattern. The fascia and the skin were approximated routinely. Penicillin and streptomycin was administered for 5 days postoperative. The follow up study for four months revealed sound recovery with no complications.

Key words: Bilateral, Inguinal, Umbilical, Hernia, Dog
Treatment of Urethral Prolapse in a Two-Year-Old Male Mixed Terrier Dog

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Urethral prolapse is the protrusion of the urethral mucosa from the tip of the penis and occurs most often in young male brachycephalic dogs. It also has been reported in a Boston terrier and three Yorkshire terriers. The exact cause is unknown but it’s reported to be the result of excessive sexual excitement or masturbation, urethral infection or both.

In May 2006, a two-year-old male mixed-terrier was referred to the veterinary hospital of The University of Tehran with signs of blood dripping for 3 days and a recent history of penile bleeding. The dog used to masturbate with a toy duck. In clinical examination a reddened protrusion was seen at the tip of the penis. The prolapsed urethra was seized but tended to be fresh with no signs of necrosis. CBC and urinalysis was normal. The dog was anesthesia and the prolapsed urethra was reduced using a lubricated urethral catheter and a purse-string suture was placed around the orifice with 5-0 nylon suture material and the urethral catheter was fixed to the body for 7 days. Cefazolin (22 mg/kg/d) for 3 days, a single dose of Dexamethasone (1 mg/kg), Tramadol (2 mg/kg orally) for 3 days and an Elizabethan collar were administered. The dog was castrated 5 days after the prolapse reduction and the owner was asked to remove the duck clot from the dog’s toys. The sutures and the catheter were removed after 7 days and the prolapse had no recurrence till now.

Key words: Prolapse, Urethra, Terrier, Dog
Gastro-Subcutaneous Fistula as a Result of Migration of a Wooden Foreign Body in a Dog

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Dogs are indiscriminate in their eating habits and may swallow foreign bodies such as rocks, wood, toys, bones, clothing, and some things like these. There are a few reports about peristaltic gastric foreign body and its migration to the abdominal wall and formation of fistulous tract between stomach and subcutaneous tissue in dogs, although incidence of this event in the ruminants is common.

A five-year-old, male Great Dane was referred to the animal hospital of veterinary faculty at Shahid Beheshti University of Tehran for investigation of a painful swelling mass at the upper part of the chest wall, on the left 8th rib to 12th. On clinical examination, all vital signs were in the normal range and lethargy, depression, abdominal pain on palpation of the mass and vomiting were seen. The owner declared that the dog has been treated with anti-emetic and antibiotic due to severe vomiting two months before and this treatment has been continued until 3 days prior to presentation irregularly. Radiographic examination showed a soft tissue swelling and osteolysis in the 11th and 12th rib and the stomach was full of gas. Based on the history and clinical examination, penetrating foreign body to the abdominal wall and gastric adhesion were suspected. In surgical exploration, skin incision was carried out on the swelling mass at the 11th intercostal space. Immediately after skin incision an abscessed cavity full of the caseous purulence was seen. After removing the pus and necrotic tissue, the sinus tract and a wooden foreign body (a sharp stick probably used as a skewer), 20 cm long, from gastric lumen to subcutaneous tissue was identified. After surgery, the wound was bandaged and antibiotic therapy and irrigation with copious amount of sterile saline for several days were recommended. To date, there has been no complaining about post surgical complications from the dog's owner.

Key words: Fistula, Foreign Body, Dog.
A Case Report of Struvite Urolithiasis in the Yorkshire Terrier

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A seven-year-old female Yorkshire terrier, presented to the veterinary hospital of Shahid Chamran University of Ahwaz in January 2007 with a chief complaint of hematuria and dysuria. Physical examination and blood analysis were within normal limits. Ultrasonography and radiography of the urinary tract revealed several calculi in the bladder. Cystotomy was performed and the stones in bladder were removed. The stones were analyzed and found to be composed of predominately struvite. Currently, struvite is the most common mineral type identified in canine uroliths. This seminar discusses the prevalence, etiology, pathophysiology, and diagnosis of these stones. Current treatment protocols and prevention measures including dietary recommendations will also be addressed.

Key words: Struvite, Urolithiasis, Dog, Urinary Calculi
Clinical Report of Megaesophagus due to Canine Distemper in 2 Dogs

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Megaesophagus is a neuromuscular disease, in which the esophagus is abnormally stretched and air and food are accumulated in it. In this condition, the food can not actively move toward the stomach and is unable to empty itself of the ingesta (ingested food and liquid) that have already entered it. This situation can be caused by one of several different abnormalities such as hypoadrenocorticism, Lead poisoning, Cutting syndrome, Canine distemper and .... In order to treat, or at least manage, megaesophagus adequately, it is very important to determine the underlying cause.

In our cases, two dogs with age of 4 and 6 years and German shepherd breeds referred to small animal hospital of Ahvaz University with signs of regurgitation, dehydration, anorexia, depression and blood diarrhea. Radiography confirmed megaesophagus in them. Rapid antigen test (Immunochromatography) was positive for distemper. CBC was abnormal (leucopenia and neutropenia). Supportive treatment was accomplished in them. Signs were removed in them after two weeks. Feeding elevated was advised for them. Our survey showed that distemper is one of causes megaesophagus in dogs.

Key words: Megaesophagus, Canine Distemper, Dog.
End-to-Side Neurectomy: an Experimental Study in Rabbits

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Various methods are recommended for nerve repair. The concept of end-to-side nerve repair was recently introduced; however, most authors have reported conflicting results with this technique. Vito et al. suggested that end-to-side neurorrhaphy may result in motor nerve repair with decreased atrophy of target organ and reduced time in nerve repair. This study was conducted to assess the effectiveness of end-to-side nerve repair in both fresh and predegenerated specimens by histological evaluation in rabbits.

Thirty male rabbits were divided into three groups. In group 1 (14 animals), fresh end-to-side anastomosis was done between the divided peroneal nerves and tibial nerves via an epineurial window. In group 2 (13 animals), the peroneal nerve was divided and sutured end-to-side to the tibial nerve, after a one-week "predegenerated period". In group 3 (n=3), which was considered the control group, the peroneal nerve was divided and sutured to adjacent soft tissues. After 3 months, specimens were harvested for histological evaluation.

Nerve fiber count in normal nerves, averaged 532/cross section. In group 1 and 2 average nerve fiber count in implanted peroneal nerves was 624 and 716/cross section, respectively. No significant difference was observed between fresh and "predegenerated" groups (p>0.0).

These data suggest that collateral sprouting of donor nerves is possible after end-to-side neurorrhaphy through an epineurial window, but the number of nerve fibers in recipient nerves is too low to result in any functional recovery in the target organ.

Key words: Neurorrhaphy, Rabbit
Prevention of Adhesion Formation by Minoxidil using Rat Uterine Horn Model: The Role of Fibroblasts Proliferation and Lysozyme Hydroxylase

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Minoxidil (MOX), in addition to its effect on hypertension and hair growth, has been proposed as a potential antiadhesion agent that is based on MOX reported ability to inhibit lysyl hydroxylase activity and fibroblasts proliferation in vitro. To examine MOX effects on postoperative adhesion (PA) formation with different times and doses of administration.

Using female Wistar rats, we evaluated the effects of MOX 0.5% and 2% solutions on PA formation using rat double uterine horn model (DUH). To induce PA animals underwent a 3-cm midline laparotomy; both uterine horns were underwent mechanical abrasion until punctate hemorrhage observation. In subsequent series of experiments, we challenge DUH with intraperitoneal administration of MOX during and 48-hours after laparotomy. An exploratory surgery was performed after 26 days, and adhesions were scored according to a standard scoring method.

Comparing with control and sham-operated animals MOX solutions, 0.5% and 2%, reduced PA formation (P<0.001). There was significant difference between groups that received MOX 0.5% and 2% solution (P=0.001). MOX solutions, 0.5% and 2%, reduced adhesion formation which used during laparotomy (P=0.05 & P=0.05), while using MOX solutions 48-hours after laparotomy did not have any effect on adhesion formation. In addition, administration of MOX solutions during and 48-hours after laparotomy had no difference when comparing with their usage just during laparotomy.

Our results showed that MOX administration might attenuate PA formation that was dose dependent but not time dependent. This supports the idea of MOX ability as an antiadhesion agent.

Key words: Adhesion, Minoxidil, Rat, Uterine, Fibroblast, Proliferation, Lysozyme Hydroxylase
A three-year-old female mixed-breed dog, undergone total ear canal ablation experimentally, was examined in Small Animal Polyclinic of Department of Small Animal Internal Medicine, Faculty of Specialized Veterinary Medicine, Islamic Azad University. Science and Research Branch for post-operative complications and painful granulation tissues. In clinical examination, the margins of the ulcer were inflamed severely and adhered to each other, resulted in marked, obvious narrowing of the orifice. Due to severe pain, the animal was anesthetized and further examination performed with otoscope. For better healing, a plastic prosthesis, 1.5 cm in length and 0.3 cm in diameter was used. After irrigation of ear and ulcer and immersion some drops of oxytetracycline around the area, prosthesis was entered into the orifice. Due to severe narrowing of the inlet, the prosthesis was fixed in its position without any instrument. The lesion was debrided twice a day, followed by application of ciprofloxacin ophthalmic drop. After two days, the orifice returned its shape and the lesions became better. After four days the prosthesis was removed and the ulcers was cured completely in eight days.

Key words: Ear Canal, Ablation, Prosthesis, Dog
Histopathological Evaluation of Autogenous Bladder Transplantation with Parietal Peritoneum in Rabbit

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For the reconstruction of bladder wall, researchers always have paid much attention to use of normal and synthetic substitutes. In this quasi Experimental pilot study, autogenous pancreatic peritoneum (APP) as an organic material for bladder grafting in five healthy rabbits has been studied. In these operations, a small piece of cranial wall of bladder approximately 2-3 cm2 in diameter was resected and replaced with (APP). To evaluate the compatibility of these grafts clinical symptoms and Macro and microscopic pathologic results were studied. In first day, rabbits were deprived but 24 hours after operations, they were in normal condition. Their urine was normal in appearance and with no blood on surgery. The heart rate, respiratory rate and body temperature did not show any significant changes before and after operation.

Necropsy findings after 90 days showed no adhesion in operated site, and no listula or ulotis in bladder lumen. Normal architecture of bladder body was also seen.

In histopathologic evaluation, regeneration of transitional epithelium, proliferation of granulation tissue bounded by grafting site, mild to moderate inflammatory response, no degenerative changes at the grafting site were the main manifestations.

It can be concluded that (APP) can be a better scaffold with the least disadvantages for repairing the defective bladder in rabbits.

Key words: Autogenous, Bladder, Transplantation, Peritoneum, Rabbit.
A Modified Technique to Remove a Polyp from the Vertical External Ear Canal in a Dog: a Case Report.

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Ear polyps are benign masses that may be found in the external and middle ear canal or oropharynx region. These polyps are the second common cause of nasopharyngeal diseases in cats but rare in dogs. The cause is unknown, both infective and congenital causes have been theorized to be associated with their formation. Others believe that they are more likely related to inflammation. Ear polyps tend to occur in middle aged to older and in male gender more than female.

An eleven-year-old, castrated, German shepherd dog with massive tissue in his ear was referred to small animal hospital of University of Tehran. Physical examination showed that hearing existed, atrophy was not seen and the mass had no bleeding and secretion. In laboratory findings, every parameters were normal. Radiographic evaluation confirmed this tumoral mass took place in a large area of vertical canal, but neither middle nor internal canal were involved and no degeneration change in tympanic bones was seen. To remove this mass, a modified technique of vertical ear canal ablation was used. In this method, incision and dissection of the ear tissue and vertical canal were less than routine procedure and a portion of the distal vertical canal was maintained, and only affected parts of the vertical canal were resected. Pathological finding of the removed mass showed that this mass was a fibrosarcomatous polyp which is rare among dogs' ear polyps.

Post operative complication includes increase in ear secretion that controlled with systemic and local Antibiotics.

Case follow up showed every critical signs of ear performance was normal and otoscopic evaluation confirmed this claim.

Key words: External Ear Canal, Dog, Polyp
Study of the Effect of Amniotic Fluid from Cow Male Fetus in Treatment of Post Operative Adhesion Band in Rat

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Adhesion in abdominal cavity can be resulted from laparotomy surgery, infection, pelvic inflammatory diseases and crown disease. It is the main cause of anemia, ileus, pelvic chronic diseases and disorder of urine and infertility.

Since these adhesions are resulted from incomplete fibrin lys, an antispasmodic agent can be useful to prevent it. In this study, amniotic fluid from a cow with male fetus has been used to prevent adhesion formation in abdominal cavity of rats.

32 one-year-old male Wistar rats, weighted 200-250gr were randomly divided into two groups of sixteen animals. Both groups were kept under the same condition.

Under general anesthesia, the linea alba was incised in 3 cm length, and five cuts were made on the muscle layers on each side of incision and a 1×1 cm biopsy was taken from abdominal muscle and the abdominal cavity was closed routinely. After two weeks the abdomen was opened again and the adhesion were recorded using Ahmad Candeza method and 3 ml amniotic fluid was poured in the abdominal cavity. The same volume of normal saline was used in control groups. Two weeks later the animals were sacrificed and the adhesion were recorded again.

The number of adhesions in treatment group was significantly less than the control one. It can be concluded that amniotic fluid is capable of preventing adhesion formation in the abdominal cavity.

Key words: Bovine Amniotic Fluid, Adhesion Formation, Abdomen, Rat
Removing a Sewing Needle from Stomach of a Pekingese Dog

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Foreign body swallowing is one of the complications in small animal practice. One of the most common foreign bodies which often caught in esophagus is needle. Needle may penetrate into the vital organs such as heart, lung, and etc., so should be removed as soon as possible. In 05122006 a male 2-year-old Pekingese dog with 5.5 kg body weighting was referred to the Department of Surgery department of Small Animal Hospital, Faculty of Veterinary Medicine, University of Tehran with the history of swallowing a sewing needle. The clinical signs included anorexia and constipation. Radiographic findings showed the needle in stomach most likely in the pyloric region. The premedication included injection of atropine (0.05 mg/kg, subcutaneously) and acepromazine maleate (0.05 mg/kg, intramuscularly). The anesthesis was induced with the combination of ketamin hydrochloride (5.5 mg/kg) and diazepam (0.27 mg/kg) and maintained with halothane. Ventral midline of abdomen was prepared for aseptic surgery. In exploratory celotomy the needle was found in the pyloric region of the stomach. The needle was passed through the stomach, the body of the needle was held with one hand and the sharp end was pressed to the stomach wall. The needle was then removed with forceps and the stomach was irrigated with normal saline solution and one inserting mattress suture with Dexon No 30 was applied. The celotomy incision was closed routinely. Antibiotic therapy included cefazolin (22 mg/kg) every 8 hours for 5 days. General condition of the patient and clinical signs, 30 days after operation was satisfactory.

Key words: Foreign Body, Needle, Pekingese Dog
The Retrospective Study of Avian Surgical Conditions Referred to Department of Veterinary Surgery, Shahrekord University

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The avian skeleton is fundamentally and significantly different from the mammalian skeleton; the bone cortices are thin and brittle, susceptible to fractures. Some times bone fractures occurred due to metabolic disease or minerals or vitamin deficiency. This study was done in the department of veterinary surgery and radiology of Shahrekord University. All radiographs that have been taken during the last year evaluated and location, type and extension of fractured determined and recorded. Wing fracture of the referred avian was the most finding between other fractures. From 11 referred avian, 8 and 3 of fracture were related to wing and pelvic limb, respectively. This study revealed that frequency rate of bone fractures of avian are different from mammals. The results of this study can be useful for decision making in avian bone fracture management.

Key words: Avian, Surgery, Retrospective
Acute Pancreatitis in a Dog after Steroid Therapy for IBD

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Prednisone has been removed from the drugs thought to cause pancreatitis in people, and based on many veterinary internists it does not cause pancreatitis in dogs. A 10-year-old, male neutered, Maltese initially presented with a 2 years history of diarrhea. The diarrhea was controlled with food and ylkosin. After a surgery to remove the kidneys, the food and ylkosin helped to be added. The patient presented with a 2 years history of diarrhea. The patient was treated with T1, B12, and food. A biopsy of the pancreas revealed plasma-cytic - eosinophilic gastroenterocolitis. Prednisone was started at 1 mg/kg tid for 7 days, then reduced to every other day treatment. The owners were very compliant and accurate with all of the treatments.

After 10 days of treatments with prednisone, the stool was much better on the days he was on prednisone and became soft again on the days off. Because of this, Prednisone was switched to budesonide 0.2 mg/kg bid. Only after 20 hours of giving budesonide, he was transferred to the local emergency clinic and later abdominal ultrasound revealed a severe, likely necrotizing pancreatitis. He spent 10 days in the ICU care, where he was treated with antioxidant medications, enteral feedings, glutamine, allopurinol, and multiple fresh frozen plasma transfusions.

This clinical case is in contrast with findings of Ritschel that daily doses of 4 mg prednisone/kg body weight or less given orally or intramuscularly for two weeks do not cause pancreatitis in dogs. This article shows the need of rethinking of steroids as a possible cause of acute pancreatitis in dogs.

Key words: Acute, Pancreatitis, Dog, Steroid, Therapy, IBD
Histopathologic Comparison of Tissue Damage and Wound Healing in the Canine Urinary Bladder Following Cystotomy with Scalpel and Monopolar Electrosurgery

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Electrosurgical devices alongside lasers and harmonic scalpel are widely employed in soft tissue surgery but it has been stated that electrosurgery retards wound healing. Considering the lack of detailed histopathologic studies regarding wound healing in the canine urinary bladder following electrosurgical cystotomy this study was undertaken to compare the histopathologic characteristics of wound healing in the canine urinary bladder following ful.

Twenty four adult clinically healthy mixed breed dogs with the mean age of 2.5 years and body weight of 15 kg were randomly allocated to two treatment groups of 12 dogs. Ventral cystotomy was performed for a length of 4 cm using steel scalpel (SS) and electroscaip (ES) in all animals and after routine closure of the cystotomy incision with synthetic absorbable suture material, the incised area of bladder was harvested for histopathologic evaluation on days 0 (immediately after cystotomy), 3, 7, 14, 21 and 28 after surgery. Tissue samples were collected from 2 animals at each time in both groups. The degree of hemorrhage, inflammation, tissue trauma, re-epithelization, healing of mucosal and muscular layers and fibrinolysis reaction were used to grade the tissue response at different time intervals for comparison between the two treatment groups.

Data were analyzed using the Mann-Whitney U test. Significance was set at the p<0.05 level.

The differences observed in tissue response between the two treatment groups at different time intervals were not statistically significant. In the SS group tissue trauma was minimal and the speed of re-epithelization and wound healing was faster than the ES group while less hemorrhage was observed in the ES group. Despite the differences observed, the process of wound healing in the urinary bladder had occurred similarly after the day 28 in both treatment groups. Postoperative complications were not seen after surgery.

In light of the following results and clinical findings, the use of electrosurgery in canine bladder surgery is recommended to decrease hemorrhage and operative time and the technique does not have any deleterious effects on bladder wound healing.

Key words: Bladder, Wound Healing, Electrosurgery, Histopathology, Canine
Generalized Subcutaneous Emphysema due to Pneumomediastinum in a Mixed Breed Dog

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Pneumomediastinum is the presence of free air or gas within the confines of the mediastinum and can commonly result from a variety of defects in the airways, lungs, oesophagus, retroperitoneal space or facial planes of the neck.

A 3-year-old intact male dog was referred to the veterinary hospital for evaluation of generalized subcutaneous (SC) emphysema. The emphysema was first noted by the owner one day after falling from a table on the dog's back and initially confined to the thoracic region but then progressed over the abdominal regions, even face and extremities. The animal had normal appetite and physical examination. Crepitations were detected on palpation of the affected areas but no respiratory distress and external wounds were noted. Bronchoscopy and bronchography detected no mucosal rupture of inspected areas. A complete blood count showed no significant abnormalities. Thoracic radiographs showed diffuse SC emphysema, pneumomediastinum and fifth and sixth ribs' fractures, but there was no evidence of pneumothorax. Therefore the air was leaked from the traumatized and ruptured bronchi and alveoli into the mediastinum. After 15 days, the subcutaneous crepitus had completely resolved.

Generalized subcutaneous emphysema occurs when air leaks strongly via aortic hila and bronchial tree planes synchronously. This phenomenon is a rare condition in dogs and routinely localized SC emphysema happens after blunt trauma. On the other hand, severe accumulation of air cause pleural rupture, pneumothorax and dyspnea in all affected dogs but surprisingly no complication was seen in this case and the animal heals spontaneously.

Key words: Pneumomediastinum, Dog, Emphysema
Histomorphological Changes of Urinary Bladder following Ileocystoplasty in Dogs

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Intestinal segments are frequently used in the reconstruction of the urinary tract in human undergoing radical cystectomy for invasive bladder cancer. Since literature documents have reported a few number of cases in animals, no specific discussion concerning effectiveness, complications or postoperative management is presented. Permanent urinary diversion may be indicated in small animals specially dogs when neobladder involves the bladder trigone. After cystectomy, the ureters may be anastomosed to an isolated bowel conduit or reservoir or into the intact colon, jejunum or ileum. To evaluate histopathological changes in the urinary bladder after ileocystoplasty, as an experimental model five healthy mixed breed dogs weighting between 15-26 kg. underwent partial cystectomy and immediate ileocystoplasty. The histological findings in neobladder showed original mucosa of the bowel persisted 45 days after cystoplasty in spite of its entire new environment. Goblet cells hyperplasia were seen in the mucosa of the bowel. The other morphological findings were congestion, edema, inflammatory cell infiltration, metaplastic changes in the urothelium, crypts, calcification, heterotopic bone formation in graft area and the presence of fibroblasts, fibrocytes and collagen fibres in submucosa, muscular and seminal layers of the neobladder. Although the exact etiology of the histological changes is unclear, it seems that direct contact of the intestinal mucosa with urine is essential for the development of the morphologic changes and it has been showed that in the absence of exposure to urine, morphological changes are not evident in the inner parts of ileal segments.

Key words: Histomorphology, Ileocystoplasty, Dog
Secondary Cleft Palate and its Surgical Treatment in a Cat: a Case Report

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A one-year-old female mixed breed cat with dysphagia, nasal discharge, sneezing and halitosis was examined in Small Animal Polyclinic of Department of Small Animal Internal Medicine, Faculty of Specialized Veterinary Medicine, Islamic Azad University, Science and Research Branch. In clinical examination of oral cavity, a cleft with 1.7 cm length was found in hard palate. The patient was referred for reconstructive operation after receiving amoxicillin 15 mg/kg for 3 days. The anesthesia was induced with acepromazine, xylazine and ketamine and maintained by inhalation anesthesia with halothane/oxygen. After surgical preparation, two incising incisions were made on both sides of cleft palate parallel to dental arches with 2.5 cm length on the mucosa of hard palate, the mucosa was dissected from the palatine bone and between nasal mucosa and mucoperiostal borders were dissected carefully. Nasal mucosal borders were sutured together and mucoperiosteal borders were sutured separately with interrupted sutures by polyglactin 910 No. 3/0. The animal received amoxicillin for 10 more days. All clinical signs disappeared after a few days completely.

Key words: Cleft Palate, Surgery, Cat.
Determining the Effect of Parenteral Doxycycline on Appendicular Rupture Mortality in Rat

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Hollow viscus perforation has a high mortality rate and one of the important mechanisms is dissemination of infection. One of the pathways of infection dissemination is through the holes in diaphragm. Tetracyclines have long been used for adhesion induction between two serous membranes in malignant pleural effusion.

In this study, we want to evaluate whether using Doxycycline in intra-abdominal sepsis reduces the mortality by obstructing diaphragmatic holes.

After general anesthesia induced with Ketamin / Xyleen a midline incision was made and the appendix explored and a 2-6 mm incision made at the top of the appendix (The procedure confirmed with expulsion of the fecal material from the appendix tip). The abdominal surface of diaphragm was then covered with a layer of doxycycline, followed by the closure of the abdominal wall routinely. At the same time another group of rats received intra-muscular ceftriaxone and gentamicin.

This study showed that there were no significant difference in mortality between, intra-muscular ceftriaxone and gentamicin group, and intra-portal administration of doxycycline following appendicular rupture.

Key words: Parenteral Doxycycline, Appendicular Rupture, Rat.
The Study of Cell Free Bovine Amniotic Fluid with Male Fetus in Prevention of Intra Abdominal Adhesions in Female Rat

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The adhesions followed by surgical operations are seen in 50-97% of abdominal and also in 60-90% of gynecological surgeries, and is known as the main reason of mechanical obstruction of bowel in 60-80% of patients. Prevention of the intra abdominal adhesion during and after the surgery is necessary. Since these adhesions are the result of incomplete fibrin lysis, an anti-coagulant can be effective. The purpose of this research was to prevent the intra abdominal adhesion formation after laparotomy in female rat by using bovine cell free amniotic fluid with male fetus.

20 female Wistar rats were used in this study in two control and test groups. Under general anesthesia, the linea alba was incised in 4 cm length, and five cuts were made on the muscle layers on each side of incision and a biopsy was taken from abdominal muscle. Two ml cell free bovine amniotic fluid with male fetus was then poured in the abdominal cavity of 10 rats and two ml distilled water in 10 rats of the control group. All rats received proper post operative care and management for two weeks. Again under general anesthesia the linea alba was opened and any adhesions were recorded and graded according to Swolin scale.

The number of adhesions in treatment group was significantly less than the control one.

It has been proved that amniotic fluid will prevent post operative adhesion formation following c-section in human. As Amniotic fluid has anti-coagulant protein C, protein S, thrombomodulin and also anti-fat and anti-stem cells, it will be effective in prevention of intra abdominal adhesions which are due to the incomplete cellular exocell fibrin hyalinosis. Perhaps the cellular components of the amniotic fluid play a role in prevention of adhesion.

Key words: Bovine, Amniotic Fluid, Intra-Abdominal Adhesion, Female Rat
The Synchronous Occurrence of a Problematical Balaenoposthitis with Orchitis in a Saluki Dog

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Low-grade Balaenoposthitis is a common condition in dogs but rarely has caused clinical disease. A ten-year-old intact Saluki male dog was referred to veterinary hospital because of a severe swelling of preputial area, hematuria and weight loss. In clinical examination, stiff gait, impaired protrusion of penis, orchitis with scrotal dermatitis and a healing wound on preputial area were seen. Complete blood count and urinalysis coincide with bacterial culture from blood, preputial discharges and urine was done. Bacterial culture included detection of aerobic; anaerobic and mycoplasma organisms. Moreover radiological and ultrasonographic examination was carried out. According to the results, pyuria and bacteriuria was seen in urinalysis. CBC showed neutrophilic leukocytosis (30000/mm³). Staphylococcus aureus and Pseudomonas aeruginosa isolated from preputial pus but in urine same bacteria was accompanied with E.coli. No bacteria was isolated from blood culture. In abdominal radiography, no abnormality was seen in kidneys and just prostatic hyperplasia and soft tissue swelling in preputial and scrotal area was present. Ultrasonography showed decreased echogenicity in left and right testes. Castration was done. In gross pathology, the testes were seen hard and asymmetrical containing creamy purulent discharges. Pus culture was negative for Brucella spp and just Staphylococcus aureus was isolated. Histopathology revealed thickening of tunica albuginea with granulation tissue formation. Spermatozoa were also interrupted. After several preputial flushing and using broad spectrum antibiotics for 2 weeks, the animal was cured. Although complicated balaenoposthitis in dogs are rare but it was concluded that traumatic etiology underlying lower urinary tract infection and secondary ascending orchitis in this case.

Key words: Balaenoposthitis, Orchitis, Saluki Dog
The Study of Cell Free Bovine Amniotic Fluid with Male Fetus in Prevention of Intra Abdominal Adhesions in Male Rat

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The adhesions followed by surgical operations are seen in 50-97% of abdominal surgeries and also in 60-90% of Gynecology surgeries and is known as the main reason of mechanical obstruction of bowel in 65-80% of patients. Prevention of the intra abdominal adhesion during and after the surgery is necessary. Since these adhesions are the result of incomplete fibrin lyses, anti-coagulants can be effective. The purpose of this research was to prevent the intra abdominal adhesion after laparotomy in male rat by using bovine cell free amniotic fluid with male fetus.

20 male Wistar rats were used in this study in two control and treatment groups. Laparotomy was performed in all rats under general anesthesia. The linea alba was incised in 4 cm length, and five cuts were made on the muscle layers on each side of incision and a biopsy was taken from abdominal muscula. Two ml cell free bovine amniotic fluid with male fetus was then poured in the abdominal cavity of 10 rats and 2 ml distilled water in 10 rats of the control group. All the rats received proper post operative care and management for two weeks. After which, under general anesthesia the linea alba was opened and all the adhesions were recorded and graded according to Swallow scale.

The result showed that the mean score of the adhesions in the test group was 1.90±0.54 which was significantly different from the control group (1.30±0.80) showing the effectiveness of amniotic fluid in prevention of the adhesions. It has been proved that amniotic fluid will prevent post operative adhesion following oesophagectomy in human. As amniotic fluid has anti-coagulants: protein C, protein S, thrombomodulin and also selenium and stem cells, it will be effective in prevention of intra abdominal adhesions which are due to the incomplete cellular exodes before hemolysis. Perhaps the cellular components of the amniotic fluid play a role in prevention of adhesion.

Key words: Cell Free, Bovine, Amniotic Fluid, Intra-Abdominal Adhesion, Rat
Cheloplasty in a Mixed Breed Dog

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Cheloplasty is generally performed to alter the shape of the lip in abnormal lips. A 6-year-old female mixed-breed dog, with previous history of surgical excision of epulides on maxilla was subjected to cheloplasty due to upper lip malformation after the surgery. After preparation of the surgical site and under general anesthesia, the maxillary gingiva right under the upper lip was incised and the incision was continued in mucosa to both right and left side toward buccal mucosa and skin. Thus two mucocutaneous flaps were created from the upper lip. Extra tissues were excised and direct apposition of the flaps, without tension in their right place was performed by 3.0 polydioxanone in two layers, starting from the midline. Postoperative care including antibiotic (Cefazolin 20 mg/kg), soft food for three days and close evaluation of the surgical wound for two weeks were performed. After resolving the inflammation and suture removal the lip was in its normal shape and the patient was eating and drinking normally with no complication.

Key words: Cheloplasty, Dog
Surgical Excision of Basal Cell Tumor in a Dog

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Basal cell tumor is the most common skin tumor in dogs and cats and can originate from epidermal basal cell or hair follicle. There is some variation in terminology for these tumors based on origin (epidermis or hair follicle). On 11/30/2006, a male dog with a mass in the neck region was referred to the teaching hospital of the faculty of veterinary medicine of Shahid Chamran University in Ahvaz. Based on the history, the owner observed a mass in the area 20 days ago, becoming larger gradually. In clinical examination, a spherical, soft mass without pedicles was observed in subepidermal region. There was no evidence of hemorrhage, scar and secondary infection on the surface of mass. The mass was resected from the base with some of underlying tissue using acepromazine-ketamine anesthesia. The specimen was fixed in formalin 10% solution. At the end of surgery, the skin was sutured with nylon 20. Antibiotic therapy was performed for four days. The sample was sent to pathology department for further examination. Microscopic sections stained with Hematoxylin-Eosin. The nuclei of tumor cells were ovoidal and nucleoli were inconspicuous. A small amount of cytoplasm was present in microscopic examination. Basal cell tumor was determined according to the characteristics of cells.

Key words: excision, Basal cell tumor, dog
Lung Lobe Torsion During Thorascopic Surgery, a Case Report in Dog

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Lung lobe torsion is a rare condition occurs most often in deep-chested dogs and more in right middle lung lobe. Torsion results in various congestion of affected lobe, predispose it for hepatization and adhesion.

In November 2007, during an experimental thorascopic surgery in order to technical assessment of a new approach for pericardiectomy in a mixed large breed, one year old male dog, the iodal volume decreased suddenly. In thorascopy, congestion and torsion line on base of left middle lung lobe were observed. Since ventilation was carried out only in right lung, the increase in the size of left middle lobe was not considerable. After changing the ventilation pattern and providing two lung ventilation, no expansion of left middle lobe confirmed the diagnosis of lung lobe torsion. Manipulation of the affected lobe by thorascopic forceps, changed the lobe to the normal position, and its color and condition became normal after few minutes.

Pneumonia, trauma, pneumothorax, pleural effusion and surgical manipulation were listed as predisposing factors of lung lobe torsion up to now. Because one lung ventilation provides a free space that increases mobility of lung lobes, similar to pneumothorax, it could be considered as one of the predisposing factors of the condition.

Key words: Lung Lobe Torsion, Thorascopy, Dog
ST6077-Poster

Investigating of Changes in Bile Composition, Cholesterol, BUN, Direct and Indirect Bilirubin, Total Bilirubin, Alkaline Phosphatase and Alanine Aminotransferase following Cholecystectomy in Dog

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Cholecystectomy is a surgical method in human and animals in the case of existing stone, inflammation, and tumors. The main purpose of this research is to study the effect of cholecystectomy on liver functions.

Ten female mixed-breed dogs were chosen randomly and cholecystectomy was done under general anesthesia. Blood samples were collected from each dog before and after surgery in days 7, 15, 30, and 60.

Results revealed that there was no significant statistical difference between the concentration of BUN, ALP, ALT and direct bilirubin before and after surgery. However, there was a significant statistical difference between the concentration of cholesterol, total bilirubin and indirect bilirubin before surgery in comparison with the days after cholecystectomy (P<0.05).

The reason for increase of cholesterol concentration after cholecystectomy can be a decrease in bile acids production. Because after cholecystectomy, due to the constant circulation of bile, the concentration of bile acids will be constantly higher in blood and consequently it will have negative feedback on liver. Regarding this, the concentration of cholesterol, which is a primary material for bile acid synthesis, will be higher.

On the other hand, the findings of this study show that the cholecystectomy does not affect the synthetic function of hepatocytes. Just due to the increase of liver load after cholecystectomy (since the liver constantly conjugates bile acids and secretes them to the intestine and it will constantly changes the primary bile acids into secondary types), the indirect bilirubin will be removed with delay and concentration of this substance, and therefore, the concentration of total bilirubin will increase.

Key words: Liver Function, Cholecystectomy, Dog
Effect of Cow Amniotic Fluid on Abdominal Adhesion Prevention in Diabetic Male Rat after Laparotomy

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In type 1 diabetic patients' wound healing is slow and adhesion could be induced after laparotomy. In this project the effects of cow amniotic fluid was studied on abdominal adhesion in diabetic and non-diabetic rats.

30 male Wistar rats, randomly assigned in three groups (one group as control) were used in this study. Diabetes was induced by intraperitoneal injection of streptozotocin (15 mg/kg) in groups 2 and 3. Blood glucose concentration was initially determined after one week and based on it, rats in group 3 received 1/3 of required insulin whereas group 2 received required insulin. After one week laparotomy were carried out and adhesions were scored according to Snell method. The results showed that cow amniotic fluid decreased adhesion after laparotomy in female diabetic rats.

It could be concluded that amniotic fluid could be used in surgeries to decrease abdominal adhesion after laparotomy.

Key words: Cow Amniotic Fluid, Abdominal Adhesion, Diabetic Male Rats
Calcium Oxalate Urolithiasis with Hemorrhagic Cystitis in Three Canine Patients

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In the present paper, in addition to report of 3 cases of calcium oxalate uroolithiasis with hemorrhagic cystitis, the related literature is briefly reviewed and the prevalence, etiology, pathophysiology, and diagnosis of these stones discussed. Current treatment protocols and preventive measures including dietary recommendations will also be addressed.

About 1% of all uroliths in dogs are calcium oxalate which is highly recurrent. The number of oxalate stones analyzed from dogs has increased in recent years. Medical protocols that will promote dissolution of calcium oxalate uroliths are not yet available. Therefore, prophylactic therapy to help control risk factors associated with calcium oxalate urolithiasis is recommended. If attempts to remove lower urinary tract calcium oxalate uroliths were unsuccessful, surgery remains the most reliable way to remove those that are symptomatic or have a high potential of causing obstruction or secondary urinary tract infection. The highest risk occurs in dogs between 8 and 12 years of age with an average age of 8 to 9 years.

A ten-year-old male Beagle and two eight and nine-year-old female poodle were presented to Veterinary Medicine of the University of Tehran with hematuria. Physical exam and blood analysis were within normal limits. Ultrasound and radiographs of the urinary tract and bladder revealed several calcui in the bladder. A cystotomy was performed and the stones were removed. Because of the appearance of the bladder wall, samples were taken from it. The stones in all patients had rough surfaces. The stones were analyzed and found to be composed of predominantly calcium oxalate. Pathological examination in all dogs revealed hemorrhagic cystitis.

Key words: Urolithiasis, Hemorrhagic Cystitis, Dog
Effect of Bovine Amniotic Fluid (AF) from Different Fetal Sexes on Post Surgical Adhesion Formation in the Different Sexes of Rats

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Post surgical adhesion formation is a significant clinical problem within every surgical procedure. Due to the problems that adhesions cause, a wide variety of adjunctive treatments to prevent the formation and reformation of adhesion have been proposed. One of the modalities that has been studied and showing contradictory results is amniotic fluid. Amniotic fluid has hyaluronic acid that is effective in wound healing of fetus.

The purpose of this study was to compare the efficacy of AF from different fetal sexes in the prevention of post surgical adhesion formation in a standardized rat adhesion model.

50 rats in two groups, each consisting of 10 rats (two groups male, two groups female and one group control) were used. In two groups, bovine AF of male fetus and in two groups AF of female fetus and in control group equal amount of aquacar was deposited intraperitoneally before closing of abdomen. All surgical procedure in different groups were similar. At 4th week after surgery, second laparotomy was performed and adhesions were scored.

Reduction on adhesion percentage compared to control animals were seen with AF, but only AF of female fetus significantly reduced adhesions (p<0.05). Adhesion percentage in control group was 40% and in control receiving AF of male fetus 37% and in case receiving AF of female fetus was 10%. The results of our study suggest that AF of female fetus is superior to AF of male fetus in preventing adhesion formation.

The rich content of hyaluronic acid and collagen of protein in AF and reducing oozing time to minimum due to steroid hormones possibly contribute to this result.

Key words: Adhesions Prevention, Abdominal Cavity, Amniotic Fluid, Rat
A Comparative Study of Four Different Suture Materials in Oral Soft Tissues in Albino Rabbits

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The purpose of this in vivo study was to evaluate the clinical reaction to four suture materials (Silk, PVDF, Catgut, CG absorb) in oral soft tissues in rabbits.

Twenty-one albino rabbits were used. After general and local anaesthesia suture materials were inserted. The animals were then randomly divided into 3 groups of 7 each. The oral tissue reaction was evaluated and graded clinically at 2, 4 and 7 days after suturing. A numerical grading from 1 to 4 was used. The data was statistically analyzed by Kruskal-Wallis test.

The PVDF suture showed lower inflammatory reaction than others, especially at 7th day, however, none of the suture materials showed a significant difference in other sampling days. Under the conditions of this study, the results demonstrated that PVDF suture material could be used as an appropriate suture material in oral cavity.

Key words: Suture Materials, Oral Soft Tissue, Rabbit
The First Report of a Malignant Testicular Teratoma and Its Metastasis to Anal Sac
In a 12 Years Old Male Dog

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Testicular tumors are common in dogs and rare in cats. The three most common types are serous cell tumors, seminomas, and interstitial cell tumors. All three types are equally prevalent in descended testes but other tumors such as teratomas are rare.

A 12 years old German Shepherd male dog with signs of dysuria and dyschezia was referred to Veterinary Clinic of University of Tehran, in 2007 autumn. Physical examination showed bilateral testicular enlargement but it was more considerable in right one. A large hemorrhagic mass existed in perianal area in anatomic location of anal sac. Rectal examination showed symmetrical, bilateral enlargement of prostate gland but there was no pain in palpation. In blood and urine laboratory analyses there was no evidence of abnormality. In radiographic and ultrasonic evaluations, BPH was confirmed and an abnormal echogenicity was seen in right testicle.

Treatment included castration and total surgical removal of perianal mass. Malignant testicular teratoma was diagnosed in histopathological assessment from all samples (both testicles and perianal mass). Teratomas arise from multipotential germ cells that have undergone partial differentiation without organization. Testicular teratomas are rare in all domestic species and most of them are benign.

This report describes a malignant teratoma and its metastasis to the left anal sac, and the procedure of surgical operation.

Key words: Malignant Testicular Teratoma, Metastasis, Anal Sac, Dog
Caecal Impaction in a Dog: Case Report

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Caecal impaction is a rare condition in the dog and reported causes include foreign bodies, neoplasia or spontaneous inversion of the caecum.

A 7-month-old, male, Dachshund dog was brought to the Small Animal Hospital, Faculty of Veterinary Medicine, University of Tehran with a one-week history of anorexia, weight loss, lethargy, depression, intermittent vomiting, normal urination, no defecation and pain in abdominal palpation.

Clinical findings, plain and positive contrast radiographic and ultrasonographic studies revealed an impaction of the caecum with foreign bodies included pieces of bone. The haemogram of the animal was normal. Treatment was begun by Ceftazidime, mineral oil and other conservative therapy for 10 days. Follow up revealed that the patient got better and the problem resolved.

Key words: Caecal Impaction, Dog
Monodactyly in a Pomeranian Dog (A Case Report)

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Monodactyly is the presence of only one digit on a limb. An 8-month-old Pomeranian female dog was referred for routine check-up to Small Animal Hospital, Faculty of Veterinary Medicine, University of Tehran. Owner also complained that the dog was not able to bear weight on right hind limb, therefore physical examination performed and monodactyly in the right hind limb was observed. For more evaluation, radiography was done and only digit II as well as malformation of distal end of digit IV and V was seen. No clinical and radiological finding of trauma or surgery history were seen.

Key words: Monodactyly, Dog
Histopathologic Study on of Experimental Defect of Lower Eyelid Conjunctive by Mucosa of the Vulva in Dog

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Different methods have been used in reconstruction of eyelid defects in human and animal. In this study - for the first time - the mucosa of the vulva is utilized for reconstruction of experimental defect of lower eyelid conjunctiva in dog.

For this purpose, 10 female dogs - mixed breed - divided to 2 equal groups randomly. After surgical preparation, a piece (1 x 1 cm) vulvar margin and also triangular piece of lower eyelid conjunctiva (1 x 1 cm) was taken. Then, the separated piece of the vulva was sutured at the place of lower eyelid defect in two layers interrupted simple pattern on the days, 7 and 14 after operation samples for histopathologic evaluation of repair were prepared. According to clinical and histopathologic examination was reconstruction of lower eyelid was successful and resulted in satisfactory function and morphology.

Key words: Reconstruction, Lower Eyelid Conjunctiva, Mucosa, Vulva, Dog
Clinical Evaluation of Pocket Technique in Repairing Third Eyelid Gland Protrusion in Dogs

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Protrusion of the gland is the most common disease of the canine third eyelid and the only acceptable treatment of "cherry eye" is the replacement of the gland in its proper location. The third eyelid gland produces 40% of tears and the excision of this protruded gland can cause a significant decrease in tear production and Schirmer tear test. Several surgical techniques have been developed to replace prolapsed third eyelid glandular tissue with the aim of preserving secretory function. The purpose of this study was to evaluate the Pocket technique in repositioning of the protruded third eyelid gland in dogs.

From December 2006 to October 2006, 26 dogs (36 eyes) with protrusion of third eyelid gland were treated by Pocket technique. All of the dogs monitored for at least 6 months. The outcome of the technique and occurrence of postoperative complications were recorded. One day after surgery the dogs were inspected for corneal ulcer by slit lamp microscopy.

Twenty two dogs (79% of all cases) were less than one year of age when prolapse was first noted by the owner. A total of 36 eyes were affected. Ten dogs (36% of all cases) had protrusion of the glands in both eyes. The success rate of surgical replacement was 97% (35 eyes). One gland prolapsed at a later date. Reprotruded gland was replaced with a second surgery by pocket technique again. Superficial corneal ulcer was seen in two eyes. Epiphora was observed in one case. Sign of mucopurulent discharge after surgery was observed in one case.

Pocket technique does not alter tear production or the morphology of the third eyelid gland cutis. Therefore this procedure can be used on prolapsed third eyelid gland without damaging the gland's duct system. In this study, no side effects were encountered with this technique. Based on the results of this study it is concluded that Pocket technique can be considered as a reliable procedure for reposition of prolapsed gland of third eyelid.

Key words: Pocket Technique, Third Eyelid Gland Protrusion, Dog
Histopathological Study of Experimental Grafting of Propuice To The Lower Eyelid in Dog

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Concerning the importance of eyelid in eye health, different methods have been proposed for reconstruction of the lid defects in human and animals. In this study prepuial graft has been used for the first time to reconstruct the experimental full-thickness defect of lower eyelid in dog. This study was carried out on 10 male, mixed-breed healthy dogs, randomly assigned to two equal groups. Following surgical preparation and anesthesia, a 1 × 1 × 1 cm triangle was dissected free from the oral margin of propuice. A defect with the same size was then created at the margin of lower eyelid, and the graft was sutured in two layers (conjunctiva and skin) to the defect. Histopathological samples were taken on days 8 and 20 postoperatively to evaluate healing stages.

According to the histopathological exam, all the grafts were taken superficially and deeply. Concerning the results of this study, prepuial graft for reconstruction of lower eyelid in full thickness defects in dog is successful and has favorable functional and cosmetic results.

Key words: Propuice, Graft, Eyelid, Histopathology, Dog
Notch Mandibulectomy in a German Shepherd Dog

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Mandibulectomy is mostly performed for resection of oral tumors. Occasionally, mandibular neoplasms are also treated by partial mandibulectomy. Notch mandibulectomy is one of the means of partial mandibulectomy.

A one-year old German Shepherd dog was diagnosed to have fibromatosus equinodes which was located in the central part of right mandible around premolar teeth. Under general anesthesia with fully opened mouth and after surgical preparation of the oral cavity, the gingival mucosa behind the canine tooth was incised 3 cm by electro surgery. Six holes were then drilled in the mandible at the lower level of roots of the teeth. Osteotomy was used to elevate the notch that was created in the mandible. A 3 cm length of right mandible was resected with the technique called notch mandibulectomy and the mucosa was apposed. Post operative care included antibiotic and monitoring the surgical wound was performed and soft food supplied to the patient.

The case was able to eat and drink normally two weeks after the operation without any complication.

Key words: Notch Mandibulectomy, Dog
Epidemiologic Study of Periodontal Disease and Dental Tartar and Tooth Scaling
In Dogs of Kazeroon

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Periodontal disease is the illness of dental supportive tissue such as gingiva, cement, periodontal ligament and alveolar bone. This kind of disease is common in dogs. Age, nutrition and chewing behaviors are predisposing factors. Study of dental diseases in carnivores can play an effective role in prevention and treatment of dental diseases. Also, most of veterinarians are unfamiliar with scaling techniques in carnivores.

This study was conducted on 40 dogs (20 pet, 20 indigenous) in Kazeroon on periodontal disease and dental tartar incidence and a comparison of manual and ultrasonic scaling.

At first, each dog was examined to detect oral cavity diseases, gingival inflammation, dental fractures, caries and periodontal pocket. Any scales were removed by cavition or curette.

In this study, the incidence of periodontal disease in pet dogs was 80%, and in mixed indigenous dogs were 20%. Scales in pet dogs was 95% and in mixed indigenous dogs was 93%.

Cavitron can produce tarter surface than curette, also, we can remove scales tarter by ultrasonic scaler in comparison with manual scaling. We also have less tissue trauma by correct use of Cavition.

Key words: Periodontal Disease, Tartar, Dog
A Case Report of the Reconstruction of Head Skin in a Dog by H-Plasty Method

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Apart from its many crucial physiologic functions, skin plays a significant role in the cosmetic appearance. In the case of any injury such as physical entanglement, burns, tumors and malignant skin damages, skin repairs either by regeneration or forming granulation tissue. Replacement of lost skin by massive granulation tissue is not appreciated as a proper treatment. Therefore, in order to treat problematical injuries, skin grafts have been frequently used. According to severity of damage different skin graft methods, range from simple methods to complicated ones such as flaps have been practiced.

In this case, an eight-year-old dog that had been attacked by another dog and was severely damaged in his head and especially its right ear, was referred to Gamisar Specialized Polyclinic. After careful examinations, and since the major part of the head’s skin was peeled off and due to the proper tension in the external surface of the cervical skin, the H-plasty method was carried out. In extensive skin wounds, after the infection has been controlled and its debridement, different corrective surgeries such as H-Plasty can be done based on the intensity of the lesion.

Key words: Reconstruction, Head Skin, Dog, H-Plasty