A four-day-old bull calf was presented by a dairy farmer for treatment of an umbilical hernia and umbilical prolapse. The calf had been born with an umbilical hernia and was treated with ligation and suture. The hernia had not resolved by the time of presentation, and the calf was referred to a veterinary hospital for further treatment.

On presentation, the calf was in good condition, with a body weight of 25 kg. The umbilical hernia was observed to be protruding through the umbilical ring, and the umbilical cord was noted to be swollen and inflamed. The calf had anorexia and was reluctant to move.

A physical examination revealed no other abnormalities. The calf was given an intramuscular injection of penicillin and procaine penicillin. A diagnostic laparotomy was performed, and the hernia was repaired with a synthetic suture. The umbilical cord was ligated and the hernia was reduced. The calf recovered uneventfully and was discharged on the 10th day post-surgery.

The horse was also presented with a similar history of umbilical hernia and prolapse. The horse had been born with an umbilical hernia and was treated with ligation and suture. The hernia had not resolved by the time of presentation, and the horse was referred to a veterinary hospital for further treatment.

On presentation, the horse was in poor condition, with a body weight of 450 kg. The umbilical hernia was observed to be protruding through the umbilical ring, and the umbilical cord was noted to be swollen and inflamed. The horse had anorexia and was reluctant to move.

A physical examination revealed no other abnormalities. The horse was given an intramuscular injection of penicillin and procaine penicillin. A diagnostic laparotomy was performed, and the hernia was repaired with a synthetic suture. The umbilical cord was ligated and the hernia was reduced. The horse recovered uneventfully and was discharged on the 14th day post-surgery.
Anatomical and Radiological Study of Polydactyly of One Hybrid Calf with Other Congenital Malformations

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Polydactyly of fore limb has been reported in some animals with other congenital malformations. One apparently dead calf with polydactyly was born by caesarean section in veterinary hospital of Shahid Chamran University. On macroscopic examinations, Arthrogryposis, cleft palate and brachygnathia inferior was diagnosed as well. In radiological study revealed cranial menometria and rib deformities. This case seems to be the first polydactyly of hind limb in Khuzestan.

Key words: Polydactyly, Congenital Malformation, Cranial Menometria, Calf.
Anatomical Study of the Cow's Digital Arteries by Corrosion Casting Method

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The importance of vessel structure was investigated in pathogenesis of laminites in horses and the existence of arterio-venous shunts in horse was proven although was not demonstrated in other species. Just a few articles were published on cow's digital arteries. Corrosion casting method is a method of choice for studying vessel structures that its efficiency in this kind of studies has been proven previously.

Kidneys of 15 limbs of 3-month-old were separated from tarsus joint. By dissection of Dorsal metatarsal artery, normal saline and then Resin metacrylate were injected in vessels. After polymerization of Resin metacrylate, saturated sodium hydroxide was put on the hooves for decomposition of tissues.

In this species, dorsal common digital and common plantar digital arteries are main arteries for blood supply. One branch moves to heel bulb and the other moves to abaxial wall and solo. The third branch of these arteries is responsible for blood supply to periosteal tissue. Proper digital artery pass into nutritional canal of third phalanx in axial surface of this bone and by means of 3 main branches in internal and external wall supply abaxial wall, solo and white line of the hoof. In contrast to horse all the main artery for blood supply of the hooves is dorsal common digital artery, and the caudal arch has only 3 branches.

Keywords: Cow's, Digital Arteries, Corrosion Casting Method
A Study of Protococcioid Effect of Formic Acid in Hydatid Cysts

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The use of protococcioidal components is very important during surgical operations. In this research, we investigated the fatality of various dilutions of formic acid on protococci of hydatid cysts with the aim of finding proper substitute (with perfect fatality) for current used materials. Protococci were isolated from sheep livers and lungs infected with hydatid cysts and divided into two groups and affected with various dilutions of formic acid (0.01-0.00001) for 3 minutes afterwards. In the 1st method, the formic acid with different dilutions was directly injected into hydatid cysts. In the second method, the same effects of various formic acid dilutions were studied in experimental labas with live protococci. We repeated these experiments for 10 times in case. Eventually, the protococci of each examination were stained with toluidine-blue and the rate of dead to live protococci was determined. The result of this research indicates that in the experimental conditions (in vivo) the 0.001 dilution of formic acid is the minimum concentration that has the highest fatality rate (100%). Therefore, the examination of this component in the in vivo method is needed.

Key words: Protococcioidal Materials, Hydatid Cysts, Formic Acid, Surgery
"Thoroughbred Ringbone": First Report in Iran

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Subluxation of the proximal interphalangeal joint (PIP or pastern joint) is an uncommon condition that occurs in the forelimb or hindlimb. Thoroughbred racehorses rarely show dorsal pattern subluxation (Thoroughbred ringbone) secondary to an injury to the soft tissue supporting the fetlock. A four-year-old Thoroughbred mare was presented with signs of lameness, swelling of the dorsal aspect of the pastern region of the right forelimb and audible clicking sound when weight was placed on the limb. A condition that appeared to have developed as a consequence of extreme overexertion 4 days previously. Radiographic examination on non-weight-bearing limbs showed dorsal subluxation of the pastern joint. The animal was generally anaesthetized and the affected limb was immobilized by casting after reduction the luxated bone into the PIPJ. The affected limb kept immobilized for approximately four weeks. Then the cast was removed and the animal kept resting for two additional weeks. After this period the animal was let to have hand-walking. Long term following-up (6 months) of the case, we found the horse to be free of lameness in the limb.

Key words: Thoroughbred Ringbone
Surgical Correction of Small Colon Facilitath in a Foal

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Colic is an important cause of discomfort in horses and is the most common cause of death. A six-month-old male Daro Shurj foal was presented for acute abdominal pain. The foal was emaciated, exhibiting signs of severe pain including restlessness and agitation, abdominal distention and had no defecation during the past 5 days. Two days prior to operation the severe intestinal gas accumulation had been decompressed via trocar puncture to the cecum and the animal was fast 4 litres of paraffin and then antibiotics administered. Based on clinical signs and the result of the diagnostic work-up, GI obstruction was suspected and the foal was referred for exploratory laparotomy. The early treatment involved intravenous administration of a balanced electrolyte solution and analgesics. Following xylazine premedication, anesthesia was induced with diazepam-ferent combination and maintained with O2-narkolan. Midline exploratory laparotomy revealed a fascia in the small colon. The bowel, proximal to the obstruction, was distended due to gas and fluid accumulation. The identified mass was hard and friable enough not to be kneaded or softened without damaging the intestine wall. A longitudinal incision was made through the antimesenteric border of the involved intestine. An approximately 400 gr mass mostly composed of dried roughages was removed. The incision was then sutured in two-inverting layers. Midline and skin incisions were closed routinely. The foal made an uneventful recovery. The foal defecated and had good appetite with sound audible anletic movements the following day. The foal had no complication in the four weeks follow-up.

Key words: Small Colon, Facilitath, Foal
Hypospadias in Goat

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Hypospadias is an uncommon congenital defect of the urinary tract in farm animals. This defect has been recorded rarely in calves, lambs, and foals in the world but there is no report in goats. The etiology of hypospadias is not well understood, it seems to be multifactorial, may be related to genetic, endocrinological, and environmental factors.

During April to October (2007), twenty-four goats with hypospadias were referred to the Veterinary Hospital of Kerman University, Iran. The age of patients varied from one week to three months of age. Perineal and testicular hypospadias were observed in all of them. In one case ectopic penis (between anus and scrotum) was seen. In one goat opening of urethra located in the prescrotal region and in the others was in perineal position. Urine leaked into the subcutaneous of ventral abdominal wall and prepuce but the skin of swelling area was normal and signs of urine scalding were not visible.

Perineal urethrostomy at proximal region of defect was used to treat the hypospadias patients. To date, there is no complaining about postoperative complications from goat's owners.

Key words: Hypospadias, Goat
Comparison the Effects of Two Different LDA Correction Surgeries on Production and Reproduction Factors

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Left displacement of abomasum (LDA) is the most frequent anatomical disorders of abomasums in dairy cows. Frequency of LDA can be less than 1% to more than 25% in different herds. However, an acceptable level is less than 3% in high-producing herds. The primary enlargement of abomasum with fluid and gas result in mechanical displacing of abomasum to the left side of the abdominal cavity, between the rumen and left lateral abdominal wall. 80-90% of LDA cases occurs in 30 days after parturition and is mostly recorded in high-producing cattle. Different methods for surgical correction of LDA have been reported based on the affected animal, surgeon’s preference and surgical condition.

This current study was undertaken to evaluate production and reproduction factors after two correction methods (group 1: omentectomy and group 2: taggie pin suture). A dairy of 2300 milking cows and annual production of 32 it were selected for this study. Data were obtained within 18 month. All affected cows were treated by the same surgeon using one of the above mentioned methods. The first method was done in a specific period and the second method was done in another period of time. 48 cows in group 2 and 15 cows in group 1 were allocated. Service per conception (SFC), open day (OD), days to first service (DFS) and corrected milk production were recorded and analyzed between the partities before and after surgery in each group (intra assay) and between groups (inter assay). A significant difference in DFS and milk production was recorded in group 2 before and after surgery but no significant differences were recorded in other parameters. A significant difference was recorded between two groups in SFC as it was higher in group 2. However, no significant differences were recorded between groups before surgery.

It seems that better production indices and also better service to conception makes taggie pin a better choice of surgery.

Key words: Production, Reproduction, LDA
Clinical Report of Inguinal Hernia in the Stallion

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Inguinal hernia may be congenital or acquired. An inguinal hernia refers to hernia contents (distal jejunum and ileum) pass through vaginal ring and enters the inguinal canal that presents in scrotum. In adult horse external and transrectal palpations are required a part of intestine is fell to pass through the vaginal ring. In every intact stallions colic is a usual symptom. Transperanally and rectal ultrasonographic examinations are helpful.

If treatment fails in early stage and colic develops in this condition, surgery is recommended. After referring stallion to clinic for making sedation we use of xylazine (1mg/kg) then inguinal and scrotal region examined and diagnosis the inguinal hernia, use ketamin (2.5mg/kg) for induction of anesthesia and halothane used for maintenance of anesthesia (at first with 4 concentration then 2 concentration and oxygen flow(36 mℓ/min) after preparing the region and pass inguinal contain to abdominal cavity after left unilateral castration planted a drain in region and super facial inguinal ring stapled by synthetic absorbable string (horizontal mattress) and stapled them by catgut string (simple continuous pattern) then skin sutured by silk (simple interrupted suture). For postoperative care penicilllin (5 million unit and streptomycin 5gr) was used for 5 days and foreign megakinetin injected for 3 days. Walking and drainage of wound edema were suggested daily as well.

Key words: Inguinal Hernia, Stallion
A Case Report of Fetal Anasarca in Iranian Sheep

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A case of abnormal female sheep fetus with 450 mm CRL and weight of 11 kg was found in Ahvaz slaughter house. In macroscopic examination, thickened skin, gelatinous and soft consistency of subcutaneous tissue, the fetal head was deformed, the upper jaw was prognathic and cleft palate was obvious. In necropsy findings the body was edematous, fragile and watery. The thoracic and abdominal cavities contained serosanguinous fluid and the lungs were not well developed and were small. Radiological study showed some crowded lumbar vertebrae. With due attention to aforementioned signs, the case diagnosed as fetal anasarca. This case might be the first case of fetal anasarca in the sheep of Ahvaz region of Iran.

Key words: Anasarca, Fetus, Sheep, Iran
Comparative Study of Azygos Venous System of the Sheep and Goat of Khuzestan Province of Iran

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This study was performed to determine the formation, course and drainage of dorsal intercostal veins in the azygos venous system of 6 adult and 50 fetuses of male and female sheep and goats. For study of veins, the thoracic cavity was opened by mid-scapular section of sternum till the attachment of diaphragm to the end of thoracic wall. The results showed that the azygos system is similar to the sheep and goat and including, supreme intercostals and deep cervical veins on the left and right side of vertebral bodies of thorax. The left azygos vein was the main vein, and the left azygos and right azygos have formed from union of 6th-13th dorsal intercostals veins and 8th-13th dorsal intercostals veins respectively. The left azygos vein after formation pursued on the left side of vertebral bodies of thorax, and after running dorsally over the left atriunum, it reached to coronary sinus of the right atriunum. The right azygos vein was an small and short vein in the right side of thorax, and after receiving blood of 2nd-5th right dorsal intercostals veins, it was joined to the cranial vena cava. Other remaining dorsal intercostals veins of left and right sides of thorax, was drained in supreme and costocervical veins of corresponding side. On the contrary of some reports, there wasn't herniazygos vein in both species. The results were compared with the reports about azygos venous system in other domestic animals and human.

Key words: Azygos, Vein, Sheep, Goat
Lacrimo Apparatus System in the Iranian River Buffalo (Bubalus bubalis): Anatomical study

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The lacrimal apparatus system provides a passage for tear drainage from the eye to the nasal cavity. Anatomical study of the lacrimal apparatus was performed for providing the normal anatomy position as well as pathologic conditions of the nasoatacleral duct. The anatomy of the nasoacmacleral duct of five buffalos (Bubalus bubalis) studied grossly. Anatomic casts of the nasal lacrimal apparatus were obtained by cannulation of the duct and use of corrosion cast (Rockopas cast) material. In gross anatomical studies, the lacrimal puncta were slit-like opening, 0.5-1 mm in diameter, located approximately 1 mm from the margin and 4-10 mm from the medial canthus just within the mucocutaneous junction of the palpebral margin. The nasal lacrimal duct extended from the lacrimal sac to the naosal in the wall of the nasal cavity. The osseous lacrimal canal runs nasally, with a slight curve at its origin. The duct then traversed the nasal cavity in a curve (descending) fashion, covered only by nasal mucosa and then connective tissue membrane. The opening of the nasoacmacleral duct was 1.5 to 2 mm in diameter and was on the lateral wall of the nostril about 40 mm from the dorsal angle of the nostril.

Key words: Nasoacmacleral Duct, Gross Anatomical Study, Buffalo.
Histological Study of the Cervix in Caspian Miniature Horse

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In order to study the histology of cervix in Caspian miniature horses, 4 female adult (3-4 years old) healthy ones were purchased from Golestan province and brought to the anatomy lab of faculty of vet medicine. To prevent the seasonal variation, all samples were taken in May (beginning of breeding season). After Clinical examination and assurance of health, animals were bled from common carotid artery, and fixative was injected through the same way. Cervices were separated immediately after death and samples of 0.5 cm thickness from endocervices and exocervices were fixed with 10% buffered formalin. Routine histological laboratory methods were used and 6 μm paraffin sections were stained with H & E and PAS and studied under light microscope.

Endocervices consisted of three layers of namely, endometrium, myometrium and perimetrium. The endometrium included wide and large primary papillae with secondary and tertiary papillae on them. Simple columnar epithelium with a few ciliated and secretory ones covered the mucosa. Lamina propria and submucosa were of dense fibrous connective tissue. Smooth muscle fibres were expanded from the inner circular muscle layer to the basal parts of lamina propria of primary papillae. Simple tubular cells were observed at the base of secondary papillae. Muscular layers were in two layers of inner circular and outer longitudinal. A small vascular layer was seen between 2 muscular layers. Serous layer covered the cervix from the outside.

Since the mucosal papillae of the exocervices were shorter than those of endocervices, had primary, secondary and tertiary papillae with various types of epithelia, namely, simple columnar, non-keratinized stratified squamous, and a transitional form with stratified squamous with columnar and goblet cells on the top of them. Few or no mucosal glands were seen. The other layers were similar to endocervices.

Key words: endocervix, exocervix, Caspian miniature horse, histology

Key words: Histology, Cervix, Caspian Miniature Horse
Anatomic Study of Digital Cushion in Sheep

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Digital cushions are some internal structures of hooves that play a major role in animal weight bearing, shock-absorbing, and stimulating blood circulation in digits. The structure of digital cushions has been studied in cows and some other animal species. In this current study, regarding to the importance of digital cushions in pathogenesis of hoof injuries, its anatomic structures in sheep were studied.

Lungs of 5 slaughtered mature female sheep were transferred to the veterinary college. For, hind, right and left limbs were determined and by direct heating the horny covering of the hooves were removed. Length and width of digital cushion and its anatomic origins and insertions were studied. Sheep have the lateral, medial and central cushions just like cows. Length of lateral digital cushions (39.68 ± 5.3) was more than medial (38.1 ± 5.29) and central (26.65 ± 3.8) ones. The length of lateral cushion in forelimbs (39.91 ± 5.62) was more comparing the one in hind limbs (37.42 ± 4.60). Central cushions were recorded as the smallest cushions (28.65 ± 3.8). Lateral and medial digital cushions extended from the heel bulb to the tip of the third phalanx. Lateral and medial digital cushion widths were recorded as (0.62 ± 0.04) and (0.53 ± 0.03) respectively which were more in forelimbs.

Although some differences in weight bearing pattern of the hooves between cows and sheep were reported, it seems that the structure of digital cushions in sheep is similar to cow.

Key words: Digital Cushion, Sheep
Lameness in Sheep: Frequency, Risk Factors, and Effect of Season and Management Type

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Sheep farming is one of the main animal husbandry activities concerning rural and tribal communities in Yomna. Extensive areas of the region are under intense sheep farming in transhumance system. Locomotor soundness is vital for effective grazing, animal production and reproductive efficiency in the livestock. The importance of the lameness in these animals is not yet clearly defined. The objective of this study was to determine the prevalence of lameness as a function of season and husbandry type among sheep in Yomna and also to describe contributing agents in this regards as well. This study was carried on 9634 sheep including 28 flock in semi-migratory and 18 flock in systems. Sheep were visited during summer and winter and locomotion scores were assigned to all adults by 1st years. The clinical findings were recorded in a self-administered questionnaire. The rate of lameness was 13.06% during the winter and 9.21% during the summer among sheep in system. Also, its prevalence was 11.12% during the winter and 7.18% during the summer among sheep in semi-migratory system; these values were significantly different. The mean prevalence of the lameness due to foot rot and hoof overgrowth in winter were significantly higher than the rates of those in summer. But the rate of interdigital pach asepsis in summer was significantly higher than its rate in winter. The results suggested that the prevalence of lameness is high among sheep in Yomna and that lameness prevalence could be influenced by season and husbandry types. Lameness should be taken in to account for the most important welfare issues affecting the sheep production.

Key words: Lameness, Sheep
Colon Obstruction in Cattle

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Intestinal obstruction occurs in all large animals. Cattle are the most commonly affected ruminants. Obstructions can occur in any part of the intestinal tract. Obstructive diseases of the large intestine can be classified into three general pathogenic groups. These are vascular obstructions, mechanical obstructions, and neoplastic obstructions. Mechanical obstructions are a result of partial or complete occlusion of the lumen due to the intraluminal masses (i.e., fecal impaction) or compression of the bowel wall by fluid masses. In this article, two uncommon cases of colonic obstruction in adult cows are described. The first case was a locally bred non-pregnant 6-year-old cow kept on a dry poor quality roughage that was presented with a history of anorexia and scanty loose faeces for the past one week. The cow was depressed and weak. The vital signs, rectal temperature and heart and respiratory rates were normal. Percussion of the right flank produced a ring resonance. Splashing sounds were heard during percussion of the right side of the abdomen. On rectal examination, a part of the large intestine was found to be distended with gas and fluids. Exploration laparotomy revealed that the cecum was distended; however, there was no food in the cecum. The distal colon was found obstructed with impacted food material additionally. Colectomy was performed and the impacted contents were evacuated manually. The second case was a 7-year-old non-pregnant Holstein-Friesian cow that maintained on poor quality roughage and inappetence for about two weeks. It had not defaecated for the last two days. Clinically, the cow was depressed with normal vital signs. Rectal palpation revealed an empty rectum and an unusual firm mass found near below the left kidney. Exploration of the peritoneal cavity revealed spiral colon obstruction with impacted material. In both two cases, the cows were alert and the appetite was improved a week after the surgery was carried out.

Key words: Colon Obstruction, Cattle
Castration of Rescued Dancing Sloth Bears (Melursus ursinus)

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Sloth bears (Melursus ursinus) are considered vulnerable by IUCN, providing proper care to this Schedule I species is very important. Inter male aggression, overpopulation and infighting in sloth bears can be overcome by castration than separating the sexes. The National Zoo policy of India is against captive breeding in rescued wild animals framed by Central Zoo Authority of India. The surgery was conducted in 18 healthy adult male aggressive and infighting rescued sloth bears. They were anaesthetised by Xylazine and Ketamine at the dose rate of 2mg/kg and 5mg/kg intramuscularly by biowipe respectively after 12 hrs fasting. Atropine sulphonate was used @ 0.025mg/kg as a preanesthetic agent. After preparing the operation site, the testes were removed by incision pre-sacral technique by putting 4 cm incision. Skin incision was made along the median raphe. Ligations were applied separately on vascular cord and on ductus deferens, encircling ligature were applied through spermatic cord by using 2-0 absorbable suture (Chronic catgut). Ductus deferens and vascular cord were transected above the ligature. The cord was then replaced in the tunic. Then simple continuous suture was applied to close the tunic, chronic catgut 2-0, and skin closed by applying simple interrupted suture on subcuticular and dermal tissue. Post operative care was carried out for 6 days and oral Erythromycin tablets and Metoclopram bolus was given with the food. The suture site was topically treated with weak iodine solution after animal was restrained in the squeeze cage. Except two animals suture site was healed normally in all the animals after 5 days. Out of two, one has mild inflammatory reaction which took 2 more days to heal. Another one developed post operative hematoma and was treated with heparin topically, aspirin and naproxen tablets and got cured in a week. In this study, the approach of canine castration described by Tharavuddin (1997) was followed successfully.

Key words: Castration, Sloth Bears
Repair of Rostral Maxillary Fracture in Horse Using Interdental Wiring Technique

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Injuries to the equine head are common, particularly in young horses. Maxillary fractures rostral to the cheek teeth are common fractures of the equine head. These injuries often originate from self-inflicted trauma such as falls or rearing with the jaw caught on a stationary object. These fractures may also result from a kick to the maxilla from another horse. A 1-year-old, male, crossbred horse was referred to teaching hospital of Veterinary Medicine School of Kazerun University, sustained an injury to the maxilla. The owner believed that another horse had kicked the animal. The animal was depressed, thin and moderately dehydrated. Saliva drooled from the mouth. The right side of the maxilla was hanging loosely and it had been attached only to soft tissue. Radiographs were taken of the right side of the maxilla and a fracture of the right side of the promaxilla was revealed. A pre-anesthesia of 1.1 mg/kg of xylazine 2% was followed by 2.2 mg/kg of ketamine HCl 10% i.v. to induce anesthesia. The animal, placed in right lateral recumbency, was intubated and anesthesia was maintained with halothane. The fracture site was thoroughly lavaged with water and a small curette was utilized to debride the fracture of feed material and small debridized bone fragments. Fracture was repaired using wiring technique and inlays (11) and four parts of the fracture line were fixed together by a tension wire. Pentazocine penicillin G (600 units, kg) and dicyclohexylamine (11 mg/kg) were administered intramuscularly for the first five days after the operation. After two months, the fracture was sufficiently stable to allow wire removal and the horse was able to prehend and manipulate properly. Rostral fractures of the promaxilla are most often open and contaminated with feed material. Fortunately, the abundant blood supply to the head, relatively stable nature of many fractures, and lack of constant distracting forces allow fracture healing in spite of these factors, which are major contraindications to the Healing of fractures in other parts of the body. The objectives of surgical treatment of rostral fractures are to restore normal occlusion and provide stability that supports fracture healing and allows normal eating and drinking. Wade repair of fractures achieves these goals, is inexpensive, and does not require specialized skills or materials. The incidence of both short-term and long-term complications is low for all fracture types, and long-term function is excellent.

Key words: Rostral Maxillary Fracture, Horse, Interdental Wiring Technique
Relieving a Sheep from Renal Adenocarcinoma by Radical Nephrectomy

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The prevalence of renal adenocarcinoma in domestic animals is less than 1% of total neoplasic reported. Neoplastic cells are more atypical and anaplastic; therefore, early diagnosis and treatment of renal cell carcinoma is essential, to prevent distant metastasis and development of clinical manifestations. The aim of the present study was to assess the effectiveness of radical nephrectomy in the treatment of renal adenocarcinoma. On July 2007, a six-year-old ewe with the clinical signs of lethargy, weight loss, and hematuria was presented to the veterinary clinic of Tabriz, Islamic Azad University. Left kidney in external palpation was painful, enlarged and abnormal. Laparotomy was done for exploratory diagnosis. In laparotomy the left kidney was obviously tumoral. Inspection of other tissue and organs at the vicinity of the affected kidney for detection of a possible metastasis was negative. Unilateral nephrectomy was carried out on this animal by local anesthesia after sedation.

Histologically, we diagnosed a renal cell carcinoma. There was no metastasis a year and half after removal of the tumor. As clinical signs of renal cell carcinoma described in humans may or may not be present in domestic and laboratory animal species, the only way to find out if a mass is a tumor, could be performing an exploratory laparotomy, besides a biopsy and histological examination. This is an easy procedure that can be performed on a sedated sheep with the help of local anesthesia. We recommend radical nephrectomy as the treatment of choice for nonmetastatic renal cell carcinoma.

Key words: Sheep, Renal Adenocarcinoma, Radical Nephrectomy
A Case Report of Isolation of Escherichia Coli in Urachal Abscess of Calf

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A 2-month-old, Hereford bull calf was presented for presence of a pendulous mass in ventral of abdomen. Physical examination, surface and deep palpation revealed an umbilical hernia and urachal abscess. Therefore the case was referred to the Dept. of surgery. Surgical preparation (shaving and scrubbing) were performed and surgical operation was done. During the surgery adhesions between umbilical mass (urachal abscesses) and greater omentum was observed. Then urachal abscess was excised from bladder apex and bladder apex stump was sutured in Parkland pattern. Finally abdominal wall (muscles and skin) was sutured routinely with No.2 Vicryl and No.2 Nylon, respectively. Cultures of abscess contents showed Escherichia Coli bacteria. This is a known documented report of Ecoli isolated from an urachal abscess.

Key words: Isolation, Escherichia Coli, Urachal Abscess, Calf
A Rare Case of Recurrent Fibropapilloma in a Horse

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A 3-year-old male horse was presented to the veterinary teaching hospital, School of Veterinary Medicine, Ferdowsi University of Mashhad for examination of a mass in the left labial. There was a 6 cm³ raised ulcerated mass close to the hoof with fleshy and multiform appearance. The tumor was surgically removed and sent for histopathology. Histological examination revealed abundant interfacing bundles of fibrous tissue with a hyperplastic epithelial covering. Pags of hyperplastic epithelium typically extended into the subjacent connective tissue. There was not any dermoepidermal activity or perpendicular orientation of fibroblasts to the basement membrane zone. The clinical findings and microscopic features of this tumor are characteristic of cutaneous fibropapilloma. Follow-up information on this case indicated that the mass had returned within four months after surgical excision.

Key words: Fibropapilloma, Horse
Benign Osteoblastoma in a Wild Caught Rescued Dancing Sloth Bear
(Melursus Ursinus)

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Very few cases of Benign Osteoblastoma (Giant osteoid osteoma) have been encountered in
drains. It is a rare lesion found in the jaw. Osteoblastoma occurs as a benign osteoid lesion around
the apices of vital teeth causing severe disfigurement of the jaws. The authors report and discuss
a case of giant osteoid osteoma in a neutered, 13yr old male sloth bear (Melursus ursinus)
weighed 125 Kgs presented with a large growth on the left upper canine region of maxilla in Von
Vihar Bear Rescue Facility, Bhopal, India. The bear was tranquilized as per standard procedure
and was intubated using an 18 mm endotracheal tube and maintained on 2-3% halothane and
oxygen at a flow rate of 3 litres/min and the bear was positioned in lateral recumbency. The upper
left canine was extracted using a surgical technique. A mucoperiosteal flap was raised from the
medial aspect of left upper canine to distal second premolar. Buccal bone was removed using a
no.8 high-speed round bur with sterile water for cooling by using dental machine. The tooth was
luxated and then elevated using an 8mm winged luxator and endodontic elevator no.3. The socket
was debridged and then the flap sutured using monofilament absorbable 4/0 suture material. The
injected tissue mass measured 3.3 x 2.5 cm. Histopathological examination of the incised mass
revealed Benign Osteoblastoma (Giant osteoid osteoma). After post operative care and manage-
ment was carried out by using a course of oral antibiotic and anti-inflammatory drugs with semi
liquid porridge the bear was completely recovered.

Key words: Benign Osteoblastoma, Sloth Bear, Melursus Ursinus
An Overview and Application of Dentistry in Veterinary Practice

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Presently very little to no emphasis is given to Veterinary Dentistry in the veterinary curriculum in India. However Veterinary Dentistry has grown in other countries. Lot of Dentition related problems go unnoticed and the animal keeps suffering from pain. In this article authors try to provide a prospective & importance of veterinary dentistry in reducing suffering of our patients. The application of Dentistry for the welfare of the wild caught rescued dancing sloth bears (Melursus ursinus) in Agra Bear Rescue Facility. The basic dental equipment, instrumentation, anesthesia, analgesia, oral examination, preparing the dental chart, dental radiography technique and periodontal diseases like root canal treatment procedure and surgical extraction of teeth in more than 36 cases were dealt in this article. The post treatment health and behavioral improvements of the patient are also discussed in detail.

Key words: Dentistry, Veterinary
Clinical and Biochemical Diagnosis and Management of Abomasal Disorders in Cattle

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The present study was conducted on a total number of 114 cattle of both sexes aged from 6 months to 10 years and suffering from one or more abomasal disorders. The affected animals were brought to a private animal farm station at Dakahlia Province, and cases that admitted to the Mansoura Veterinary Teaching Hospital (MVTMH). In addition to the cases surveyed at Mansoura abattoir. Those animals were subjected to a full blood history, clinical examinations as well as histopathological examinations for some cases of abomasal disorders. Also, ten clinically normal dairy cows were selected and served as control groups for laboratory examination.

LOA were diagnosed clinically in 34 Holstein cows and confirmed by laboratory tests. The peak of disease occurrence was seen in the late autumn and winter. The affected animals were subjected to left flank omentotomy or left flank abomasotomy, which gave satisfactory results with complete recovery in 27 cows with success rate 84.4% after the third follow up (90 days). AV was diagnosed in a Holstein cow with a history of complete anorexia, sharp drop in milk production, borborygmi, marked depression and dehydration, and were subsequently treated. The diagnosis was confirmed by necropsy findings. Abomasal impaction was diagnosed clinically in 4 cows. Those animals showed no response to the traditional medical treatment and consequently subjected to left flank omentotomy in combination with medical treatment. Good result was obtained only in a cow while the other 3 cases were sold for slaughtering in postmortem examinations. Different sites, types, numbers, locations and sizes of abomasal erosions and ulcers were diagnosed in 35 cattle. Also, different forms of abomasitis were recorded in 40 cattle.

Key words: Abomasal Disorders, Cattle
Assessment of Application of Two Kinds of Sutures Materials and Uterine Sutures Patterns in Healing Process in Pregnant Ewes

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Hysterotomy used to remove fetus and specific intra uterine medicine in fetus. There are numerous factors involved in successful wound healing. Among these factors inflammatory process have main role and most influential to give enough qualification in healing process should pay attention to suture materials and sutures methods. According to this research which has done in veterinary clinic of Azad University of Shahrekord the project on 15 ewes that's pregnant on 80 - 100 days at first step the ewes selected on 3 members of groups, A group as controls and other once (4 group) as treated groups. Uterine were stitched by vicryl (polyglactin 910) and Cutgut suture material with two methods: Lambert and simple continues method. The ewes holding in same condition. After delivery despatched to slaughter house and prepared histopathologic samples from their uterins. After study on histopathologic samples, proliferation and macrophagial migration and fibroblast observed. The chronic granulomatosis inflammatory reaction observed in usage Cutgut more than vicryl suture material mean while in continued suture pattern have more histological damages caused by chronic granulomatosis inflammatory reaction is more serious than lambert suture. According this finding seems the proliferation and migration of fibroblasts affected on kind of suture and suture method.

Key words: Suture Pattern, Suture Method, Repair, Uterine
Aminosynthesis by Surgical Methods and Comparing the Biochemical Parameters of Ewe's Amniotic Fluid and Maternal Serum due Second Half of Pregnancy Period

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Today using the aminosynthesis method in veterinary medicine for analyzes biochemical behavior to determine sex and cytogenetic defects noticed by several researchers. The purpose of this study competence of aminosynthesis technique for determine and cooperation of normal amplitude biochemical parameters in amniotic fluid and maternal serum in sheep in second half of pregnancy.

In this research 12 ewes pregnant ewes 80 - 100 day of pregnancy selected before surgical activity examination and bleeding (5 ml) in each ewes and separated the serum. After inoculation on pregnant horn sampling from amniotic fluid. Our finding show cholesterol concentration, rate of glucose, total protein, alkaline phosphatase, alanine amino transferase, creatine kinase, lactate dehydrogenase, amylase, calcium, phosphorus, sodium, iron (P < 1 %) and rate of triglycerides and osmotic pressure (P < 5 %) in maternal serum are more than amniotic fluid. But creatine rate in amniotic fluid is more than maternal serum (P < 5 %).

According to the limitation in aminosynthesis method in veterinary medicine this technique for biochemical survey in amniotic fluid is useful for understanding growth mechanism and development of the fetus and diagnosis several diseases in mother and fetus.

Key words: Aminosynthesis, Amniotic Fluid, Biochemical Parameters, Maternal Serum
Surgical Treatment of Nasal Squamous Cell Carcinoma (SCC) in a Cow

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Squamous cell carcinoma is a common tumor in cats and horses, but it is possible to occur in other animals. Squamous cell carcinomas are usually firm, white, poorly demarcated dermal masses that are ulcerated and streaked with red. It could be possible that ulceration and hemorrhage observed on the surface of the mass. In 21Jun2008, 5-year-old native cattle referred to the teaching hospital of faculty of veterinary medicine of Shahid Chamran University in Ahvaz. She had a fungoid, hemorrhagic mass that infected by masses in left nostril. The mass appeared since 2 month ago and hemorrhage begins from 2 days followed by masses. CBC showed moderate neutrophilic and eosinophilia and vital signs were in normal range. After aseptic surgical preparations and local anesthesia, an incision was made around the pedicle of the lesion and the mass removed after blunt dissection. Bleeding was controlled, and then the subcutaneous and skin tissues were sutured. Antibiotic drugs for 5 day after surgery and a single dose of subcutaneous Ivermectin were administered. Pathological examination and clinical observations confirmed the diagnosis. SCC is recognized microscopically by identifying malignant epithelial cells demonstrating various degrees of differentiation towards keratinocytes. The tumor cells are most resemble those of normal stratified epithelium, but have vesicular nuclei with one or multiple very prominent nuclei. Cytoplasm is usually abundant and eosinophilic. Several degrees of keratinization are observed throughout tumor cells.

Key words: Squamous Cell Carcinoma, Cow, Surgery
Efficacy of Rolling Method for Correction of Left Abomasal Displacement in Dairy Cows

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Left abomasal displacement (LDA) is one of the important diseases of high producing dairy cows. It is a multifactorial disease and has much economic losses.
One of the most common non-surgical treatments of LDA that is easy, quick and economic is rolling method.
In this study that was performed in a large dairy farm of Holstein cows from 2001 to 2002, rolling was applied to 210 cases of LDA.
Out of 210 cases, 50 cows (23.81%) where cured, 141 cows (67.54%) had recurrence of the disease from 24 hours to 7 months post rolling. In 16 cows (7.62%) rolling resulted to displacement of the abomasum to the right side. In two cases (0.95%) rolling couldn’t replace the abomasum and in one case (0.48%) resulted to intestinal volvulus and culled the cow.
Out of 141 recurrent cases, in 101 cows (71.63%) LDA occurred during the first week, in 18 cows (12.77%) during the second week, in 11 cows (7.80%) during the third and fourth weeks and in 11 cows (7.80%) during the 2 to 7 months post rolling.
Results of this study showed that the efficacy of rolling for LDA correction was higher than those of some previous studies. Although the post rolling recurrence of the LDA is significantly high, but this method can be saved for emaciated, fatir or aged cows and the cows with concurrent diseases (metritis mastitis, ketosis, severe lameness and etc.

Key words: Rolling Method, Left Abomasal Displacement, Dairy Cows
Chronic Non-Seko and Diffused Chemical Peritonitis in a Calf

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Peritonitis is a regional or total inflammation of visceral and parietal surfaces of abdominal cavity. Primary response of peritoneum to stimulation is transudate secretion. A male three years old Holstein calf was referred to the veterinary teaching hospital of School of Veterinary Medicine of Shiraz University. According to the owner statements, the calf was oliguric and umbilical region had swelled with some secretion occasionally since about one month ago. In clinical observations, heart rate, respiratory rate and rectal temperature were normal and umbilicus was too rigid with no secretion. Followed premedication of xylazine and local anaesthesia, median incision was made on umbilicus. Subcutaneous tissue was fibrous and discolored to dark brown, which was removed completely. In order to more exploration, after opening of abdominal cavity, about a lot of cream color fluid with a moderate odor was existed. In exploration of abdominal cavity, all visceral organs including intestines, omentum, abdomensura, liver and mesenter were adhered together, so that their dissociation was impossible and all were covered by a fibrous layer. It seems that the calf has had an open urachus from its birth, so that urine had been entered to abdominal cavity, too, and it has been closed after some time. Ultrasound caused a chronic, diffused, non-septic (stainle) chemical peritonitis.

Key words: Peritonitis, Diffused, Calf
CUTANEOUS FIBROMA AND ITS SURGICAL EXCISION IN HORSE

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Fibroma is a benign mesenchymal cutaneous tumor which has a rare occurrence in large animals and has mostly seen in dogs. They often occur in adults, sex and breeds have no effect on its prevalence. These neoplasms are round to oval shaped and cause intradermal or subdermal masses. Occasionally ulceration of its surface is followed by secondary infections. Fibromas have a homogenous cross section, while le grayish color. They are treated by complete surgical excision. An eight year old, light brown stallion in a horse-racing club had two gray skin masses on its left thigh and thoracic inlet with a slow growth since two years ago. They were 5x7 cm in size, irregular shaped with some convex parts. Bleeding had seen on its surface occasionally. CBC and WBC differential tests were normal like his general clinical examination results. Under general anesthesia (premedication, induction and maintenance by xylazine and ketamine) two neoplastic masses were excised completely. The lesions were only cutaneous with no subcutaneous tissue involvement. Histopathologic results confirmed cutaneous fibroma based on numerous fibroblasts and collagen fibers. There was no recurrence or any other complication in post-operative monitoring for six months.

Key words: Cutaneous Fibroma, Excision, Horse
Melanocytoma in a Horse: Case Report

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Pigmented lesions are common in dog and cat. They are less common in horse and pig and rarely found in laboratory animals and other domestic animals kept for food and fiber production. The true incidence of pigmented lesions in animals is not known. Melanocytoma is a benign tumor arising from the melanocytes in the epidermis or dermis. An 8-year-old female Arab horse due to the sessile black neoplastic mass located in the neck and gluteal region measuring approximately 4 x 5 x 4.5 cm was referred to veterinary teaching hospital, Islamic Azad University of Shahrak. The mass was apparently healthy, with normal appetite and no apparent difficulty in jogging trial. The abomasal tissue was surgically resected after surgical anesthesia induced by ketamine, xylazine, atropine, and diazepam. Placed in 10% buffered neutral formalin and submitted for histological evaluation. Microscopic examination revealed typical melanocytes that occur either as single cell or small nests of tumor cells in the hypoderm. These tumor cells are round and have a large amount of intra-cyttoplasmic melanin, which tends to obscure the nuclear morphology. More than three mitotic figures per 10 high power fields are observed and variable amount of collagenous stroma often present between the neoplastic cells. No neoplastic melanocytes were present in the epidermis and dermal component. Based on gross and histopathological characteristics, the mass was diagnosed as well-differentiated malignant melanocytoma.

Key words: Melanocytoma, Horse
A Case Report of Isolation of Escherichia coli in Urachal Abscess of Calf Concurrent with Abomasum Adhesion and Histopathological Study

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A 4-month-old, Holstein bull calf was presented for presence of a pendulous mass in ventral of abdomen. Physical examination, surface and deep palpation revealed an umbilical hemia and urachal abscess. Therefore the case was referred to surgery. Thus surgical preparation (shaving and scrubbing) were performed and surgical operation was done. During the surgery adhesions between umbilical mass (urachal abscess) and abomasum was observed. Then urachal abscess was excised. Finally abdominal wall (muscle and skin) was sutured routinely with No. 2 Vicryl and No.2 Nylon, respectively. Cultures of abscess contents showed Escherichia Coli bacteria. Histopathological evaluation revealed a great blood-vessels concurrent with fibroblast cells increasing in deep of skin was observed. Near to superficial layer of skin less of blood-vessels and expose collagen filaments were observed. In addition histopathological studies confirm presence of adhesions in surrounded tissues. This is a known documented report of E.coli isolated from a urachal abscess plus to abomasum adhesion.

Key words: 0, Urachal Abscess, Calf, Abomasum Adhesion, Histopathological
Getting Rid of Galactophagia in Dairy Cattle

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Inter-suckling or galactophagia is an abnormal behavior in dairy heifers and cows. Inter-suckling may lead to considerable economic losses in reduced milk yield and might also cause losses due to mastitis in heifers and cows.

Washing rings or anti-suck milker has been used to provide assistance in the animal being approached by milk thief cow. In this way, an object with spikes is fastened to the muzzle of the milk sucker. Noseband-halter is also used. Other methods include using a cradle to limit the neck movement, and smearing bitter substances on the body to discourage the behavior. However, the effect of those methods has not been satisfying and reaper rate is high.

Surgical procedure of the tongue in order to stop inter-suckling and self-sucking has been tried with varying outcomes. This method narrows the width of the tongue so as to prevent the animal from rolling the tongue to grip hold of the teat and thereby prevent inter-suckling. Cows being operated upon in Shiraz area have good and satisfying performance after surgery. This method is recommended for high genetic milk cows as the cost of surgery does not allow the operation to be done on low producing cows. These cows are usually culled from the herd.

Fifteen milk thief cows were operated in an attempt to get rid of the behavior between November 2000 and November 2007, all of them did well mainly after their dry period and coming again into the lactation group. Out of twenty inter-suckling cows that were prevented from milk theft by applying several kinds of nose ring all but two of them resume the behavior or found a way to inter-suckling.

Therefore the best solution to the problem is surgery considering its own complication.

Key words: Galactophagia, Dairy Cattle
Clinical Report of a Mare Affected by Buckedshin

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A ten-year-old Arab race mare with severe inflammation and a chronic wound on the fetlock and pastern of left hind limb was referred to the Veterinary Clinic of Shahid Bahonar University of Kerman. The limb was injured 6 month before due to tightening of a rope around it. On presentation, the mare had no signs of lameness during exercise. The lesion was smooth and well defined indicating the benignity of it. There was an osteoarthritic lesion in fetlock and pastern joints and high and low stifle were observed around the talar joint. The same lesions were in Dorsoplantar view. In Dorsoplantar medial oblique view from the opposite limb, new bone formation and a moderate osteoarthritis were observed in coffin joint, which can be attributed to the over-burden of the limb. On visual examination the animal was diagnosed to have a small hock behind due to faulty conformation of the animal that imposed too much force on the bones and joints of the limb, which was aggravated by the trauma.

The wound was managed as open wound and penicillin−streptomycin(6000 l/kg−IM) and dexamethasone(0.2mg/kg−IM) were administered for 2 weeks. The wound healed after 40 days.

Key words: Mare, Buckedshin
Congenital umbilical haeopocoele in a newborn native calf

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Hernias occur in humans and animals with different causes and have two forms: internal and external hernia. Umbilical hernia is an external form of hernia. It's a common form of hernia that occurs in animals after a severe trauma or animal fighting or as a congenital defect. On 31/12/2005, a 3-day-old native male calf referred to the teaching hospital of faculty of veterinary medicine of Shahid Chamran University in Ahvaz. He had a large unknown mass around his umbilical zone. It was about a ball of handball in size. The calf was recumbent since he was born and fed by hand. All vital signs were in normal range. After surgical preparation, local anesthesia performed by lidocaine 1%. Hernial content included loops of small intestine, and the whole of liver. There was not any ischemic lesion on liver and intestine. After reduction of hernial content, surgical midline incision sutured with sliding mattress suture pattern by nylon 0. The animal treated by oxytetracycline for 5 days. This is a report of a rare form of congenital umbilical haeopocoele in a newborn native calf.

Key words: Umbilical Haeopocoele, Congenital, Calf
Clinical Trial of Non-Surgical Treatment on Abomasal Displacement in Holstein Cows

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Displacement of abomasum occurs most commonly in large-sized, high-producing adult dairy cows immediately after parturition. The condition causes a large economic loss to dairy cattle producers (milk reduction, surgery and medication). With regard to importance of condition, we decided to replace abomasums without surgical treatment. The aim of trial was to evaluate the effectiveness of non-surgical treatment on abomasal displacement. Three goals were followed: first, replace of abomasums in its location, second, prevention of recurrent of abomasum, third, administration of medication that can reverse abomasums motility and electrolytes balance. The procedure consist of rolling the cows as followed: The cows were cast and lay on her left lateral and back for 10 minutes. Again the procedure was repeated, and then allowed cows stand, walk and run to prevent displacement. The chance of success in advanced stages was greater when the rumen was small. For this reason the herdman was advised to restrict the animal from food and water for a day. Some cases have received violent exercise and transported over bumpy roads leading to abomasums correction. Electrolyte and glucose were administered to prevent ketosis. The results will be discussed in detail.

Key words: Non-Surgical Treatment, Abomasal Displacement, Holstein Cows.
Sonographic Study on Vesicular Hydatid Cyst in Sheep Kidney

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Echinococcosis, although eradicated in many countries, is still widespread in communities in which agriculture is dominant, and cystic hydatidosis is a significant public health problem in regions where Echinococcosis is endemic. Hydatid cysts may be found in almost any part of the body, but most often in the liver and lungs. Other organs affected occasionally include the brain, muscle, kidney, bone, heart and pancreas. This report documents a rare case with a cystic nodule in the sheep kidney, detected by ultrasonography. The sheep was a 3-year-old, female, with a history of abdominal pain. Ultrasonography revealed a cystic nodule proximal to the kidney. Ultrasonographic examination of the cystic nodule showed a hypoechoic wall with multiple echogenic foci, suggesting that the nodule could be a Hydatid cyst. In postoperative examination of the nodule showed a cystic Hydatid cyst.

Key words: Sonographic, Hydatid Cyst, Sheep, Kidney.
Effects of Hoof Trimming on Locomotion Score Pattern in a Dairy Farm

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Hoof trimming, proper bedding, foot bath and management of rations are main factors in health of the cattle hooves. Hoof trimming result in proper weight bearing surfaces on the hooves, however, it has been proven that hoof trimming can increase locomotion score. This current study has been done to evaluate impact of hoof trimming on locomotion score (LS) in a dairy farm consist of 1000 milking cows with average production of 37 kg/day during a 9 month period. All cows have been scored on monthly basis and hoof trimming were done based on days in milk and drying off the caws.

In according to the results data from 2192 cows were recorded. The average LS before (1.48) and after (1.45) trimming didn't show any significant changes. In 1782 sound cows with LS of 1 or 2, 87.45 percent didn't show any changes in next score (89.9% in untrimmed cows), 10.1 (9.1% in untrimmed cows), 1.8% (3% in untrimmed cows), 0.65% (0.7% in untrimmed cows) changes to LS 3, 4 and 5 respectively. In score three cows following hoof trimming 48.8% (48.8% in untrimmed cows), 43% (41.2% in untrimmed cows) and 8.4% (5.5% in untrimmed cows) decrease, without any change or increased respectively.

Results indicate that increase of LS following hoof trimming occurs more frequently in LS 1, 2 and three. Results of current study are compatible with the previous reports concerning risk of increasing LS and possibly lameness following hoof trimming.

Key words: Hoof Trimming, Locomotion Score, Dairy Farm
Lameness remains a considerable economic loss in operations. Lesions related to lameness include treatment cold, milk production, infertility and premature culling. The majority of bovine lameness involves structures of the digit. Claw capsule lesions are the most common cause of lameness in cows.

During the entire year of 2005, a survey was undertaken by the authors on the prevalence of different claw lesions causing lameness on 3065 cows and bulls at a cattle abattoir in the vicinity of Ardebil which was well equipped and with new constructions. After recording information for each case, the feet were amputated and solar parts of the claws were pared for more morphopathological studies.

The claw lesion in cows (80.4%) was more than bulls (19.5%) (P<0.05). A chi-squared test applied to the corresponding table of frequencies showed these rankings to be significantly different (P<0.05). The prevalence rate of claw lesion among all cases was 24.2 per cent. Most lesions occurred in the feet, the commonest were slurry heel (51.8%), white line disease (24.2%), diffuse septic pododermatitis (10.4%), sole ulcer (9.3%) and aseptic traumatic pododermatitis (4.1%). The prevalence rate of claw lesion in the fore limb was higher than limb. Slurry heel was the most important factor as the cause of deep sepsis of the digit.

The results obtained from the study demonstrate that lameness is an important problem in cows and beef herd in Ardebil.

Key words: Claw Lesions, Culling, Dairy Cow, Deep Sepsis, Digit, Lameness
Clinical Field Trial of Topical Application of Provita Combat Hoof Spray for Individual Treatment of Papillomatous Digital Dermatitis in Dairy Cows

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Despite the widespread nature of Digital Dermatitis, there have been few peer-reviewed published reports on the effectiveness of treatment regimes. However, three approaches to Digital Dermatitis treatment have been used: (1) systemic antibiotics, (2) individual topical treatment, and (3) mass topical therapy which are still controversial when the control and prevention of disease is concern in a herd level.

The present field study was conducted at five herds in five counties with a total population of 2430 milking cows on 160 affected cows bearing different lesions of Papillomatous Digital Dermatitis (PDD). In each herd, 16 cows selected and allocated randomly in one of the two following group treatments: topical spray of Provita Combat (n=8) and topical dressing with Solka Hoof gel + bandage (n=8). The lesion type 0-4, pain 0-2, color 0-2 and size 0-2 scoring prior to application of Provita Combat and Solka Hoof gel were used prior and at the end of trials and comparison was made statistically using Non-parametric U-test with 0.05 level of significance.

From the photograph taken in each treatment the healing rate and the slope of linear regression were calculated and comparison was made statistically by using One Way Non-parametric Analysis of Covariance.

Results showed a significance difference in evaluated Total Lesion Scores (TLS) between two groups in favour of topical spray of Provita Combat, -7.36 and -5.14 respectively. It was also confirmed that the speed of healing rate had a significant steeper slope (b = -0.48) in group using Provita Combat. It is concluded that the feasibility of Provita Combat Spray application is high and the complete healing pattern achieved significantly in cow particularly when the campaign program of PDD is concerned with Provita Hoof same Endurance in a herd level.

Keywords: Provita Combat Hoof Spray, Papillomatous, Digital Dermatitis, Dairy Cows
Evaluation of Possible Post Parturient Elevation of Locomotion Score

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Lameness is one of the major problems of dairy herds in the world and following infertility and mastitis is the most important cause of losses in dairy farming. Stage of lactation recorded as one of the most important risk factors of this condition as most of lamenesses occur in the first 3 months of lactation. Parturition problems and edema may potentially increase walking pattern and locomotion score.

The present study aimed in evaluation of locomotion score of cows after parturition and its comparison with other days of milking.

Study was performed in a dairy herd with 1600 milking cows with average production of 35 litters/day milk. The locomotion score, based on five point scale lungeitch system was recorded and compared in three groups (group 1: days in milk 1-16, group 2: days in milk 17-30 and group 3: days in milk 31-100 days). All data was compared with Chi-Square in SigmaStat software and P<0.05 considered as significant level. The frequency of scores <3 (63.9 ± 10.2, 88.1 ± 11.3 and 86.6 ± 6.8 in groups one, two and three respectively) and score 3 (12.8 ± 1.1, 13.4 ± 10.3 and 9.9 ± 3.7 in groups one, two and three respectively) revealed a significant difference as this significance recorded between groups one and three. No significant difference has been recorded in other groups between other scores.

No false increase in locomotion score happened after parturition and as other studies the highest locomotion scores are in higher days in milk.

Key words: Locomotion Score, Parturition
Histomorphologic Study of Ovine Hoof

Hooves are the main part in weight bearing structures of ungulates. Anatomic and histologic structures of the hooves in horses and cows showed its laminar structure. Interdigitations of dermal and epidermal laminae make hooves stable. Different layers of epidermis from stratum basale to stratum corneum were recorded in hoof histology. In horses laminar layer divided to primary and secondary laminae but in cows presence of just primary laminae were reported. Arteriovenous shunts were reported in both species as a possible base for pathogenesis of laminitis.

Laminitis is a common sequela of grain overload in horses and cows that result from rupture of the laminar layer. Regarding to lack of reported data on histology of the ovine foot, this current study were done to determine normal histologic structures of the ovine foot as a basis for further experiments.

Limbs of five slaughtered sheep were transferred to veterinary college and its right, left, fore and hindlimbs were marked. All limbs evaluated for possible injuries before study and just sound limbs were selected. A histologic specimen was taken from the toe region of each digit. All samples were transferred in 10% formaline and after washing transferred to 20% formalin. After two weeks histopathological slides with 5 μm thickness were prepared and stained by H&E technique. All data were measured in the toe and lateral wall of the toe region.

Number of laminae in the toe and lateral wall region recorded as (26.41 ± 6.07 & 20.97 ± 3.7) in a centimeter length of the hoof respectively. Thickness of the laminae in the toe and lateral wall regions recorded as (0.24 ± 0.046 & 0.29 ± 0.063 mm) respectively and length of the laminae in toe and lateral wall region recorded as (4.54 ± 2.16 & 3.47 ± 1.83 mm) respectively.

Key words: Histomorphologic, Hoof, Ovine
Field Study of Hoof Wall Problems in Unshod Working Horses

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A population of 100 native breed unshod working horses was examined for hoof wall problems. The diagnosis of hoof wall defects was performed by close visual observation and via physical examination. The location, extent and types of defects were then determined and recorded. Out of 100 horses, 124 hoof wall defects were noted in ninety working horses. The number of each defect in this study included the following cases: hoof wall horizontal grooves: 40, quarter cracks: 30, long toe problems: 20, toe cracks: 10, underrun heel: 10, white line disease: 4 and sheared heel: 4. Ten horses of our study had healthy hooves without any problems. Ninety percent of the horses had more than one defect in their hoof walls. This suggests that regular trimming and shoeing of the equine hoof can prevent and reduce hoof wall problems and reduce the rate of lameness in working and racing horses. Therefore, by performing regular trimming and shoeing, we can protect horses' high performance and raise high quality breeds of horses.

Key words: Hoof Wall Defects, Unshod Working Horse.
A New Remedy for Treatment of Sole Abscess in Dairy Cattle

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Lameness is one of the most causes of cutting in dairy herds. It has a high incidence in high-producing herds, for example in some country average incidence is around 50 cases per 100 cows per year. Because of its effect on subsequent fertility and production, the cost of lameness is considered economically significant in dairy herds.

Sixty multiparous Holstein-Friesian cows with sole abscess and abscesses were selected and randomly divided equally into two groups, treatment group and control group. All cows in the two groups had grade five lameness (AABP). Treatment group cows were treated with a new remedy. All under run and damaged horn were removed first, then hydrotherapy using water from a hose was done and finally the lesion area was covered with the prepared remedy and finally bandaged. The same procedure was repeated three to four times every other day. New growing tissue rapidly appeared on day three of the treatment and then became hard so that the cows could walk comfortably on hard surfaces.

In the control group the same treatment procedure was done unless the remedy was not applied to the lesion site, instead topical antibiotics were applied. Considering appearance of the new growing tissues and lameness score after one month from the treatment, there was a significant difference between the two groups (P<0.05) so that the treatment group cows could walk well in the first few days of treatment.

In this article we introduce a new remedy and present a novel result of treatment in sole abscesses.

Key words: Remedy, Sole Abscess, Dairy Cattle
Cardiac Response to Exercises in Iranian Race Horses

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Exercise intolerance and poor performance are terms that have been applied to race horse to describe the horse that is not performing up to the expectation of the owner and/or trainer. Ideally, “exercise intolerance” should describe the horses that is incapable of both training and racing, whereas poor performance should describe the horse that is capable of adequately training, but performs poorly during racing. Performance should undergo a standardized investigation on major systems involving oxygen transport (respiratory tract), cardiovascular system, blood and musculoskeletal system. Among systems responsible for successful performance, the cardiovascular system has an important role in the evaluation of exercise tolerance in horses. Examination of heart at rest and post-exercise, the rate of fall in heart rate following exercise and the time required to reach resting levels and detection of dysrhythmias are normally used to evaluate cardiac response in athletic horses. For most competitive activities in horses, superior aerobic capacity is the crucial physiological characteristic. Treadmill exercise testing or exercise testing on the track often is helpful in enabling objective indices of performance to be determined. These allow comparison in individual horses over time and changes in fitness. The advantage of the treadmill and the reason for its use in many institutions is that the level of exercise can be strictly controlled and a range of samples can be collected during the period of exercise. In contrast, exercise tests undertaken at the track do not require such an expensive capital outlay, a more real situation of competition on yard, but the range of tests that can be performed are more limited. The present article explains the cardiac response of some Iranian horse breeds horses to submaximal exercise in race-track.

Key words: Cardiac Response, Exercise, Iranian Race Horses
Field Study of Joint and Bone Lesions on Working Horses in Korbal Region of Fars Province

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This study was performed on working horses in korbal region of Fars Province. The farmers of this area have been utilizing the horses as the chief working machine in their farms. So, this animal is used for planting, processing, harvesting and rice packages transition. The farms are usually story, muddy and have deep canals and puddles. In addition, the horses are kept in open environment with uncomfortable floor and poor nutrition. Therefore, this unsuitable condition leads to bone and joint problems and some lesions. The study was performed on 100 horses in Korbal region focused on bones and joints problems under the corpus and tantrus region. Results indicate that the lesions in Stallions are more than mares and in autumn (harvesting season) was more than other seasons. In addition, young and old horses were affected more than middle age horses. In our knowledge, no research has been performed on lameness in working horses up to now, but a study on racing horses in USA shows bone and joint lesions are the most reason of lameness in the spring and winter but in our research the lesions occur more in the autumn (harvesting season).

Key words: Hard Tissue, Lameness, Working Horse, Field Study
Studying the Pattern of Lameness Incidence according to Season and Lactation Period in an Industrial Cattle Farm in Iran

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Lameness is a major problem in dairy herds and is the third most prevalent factor of great economic losses in dairy farms. Incidence of lameness in dairy herds is influenced by several factors such as management, environment, and congenital agents. This study was performed to evaluate the significance of lameness control methods according to the lactation period, to study the influence of season on lameness incidence, and to evaluate the importance of known factors affecting lameness in intensive dairy farms in Iran.

This is a retrospective study in a dairy farm near Tehran with 1500 milking cows in one year period (March 2006 - March 2007). For statistical analysis, lameness incidence was calculated as number of cases/1000 milking cows/year. Results were processed by chi-square statistical test.

Lameness in early lactation is the most prevalent period in dairy farms all over the world. Lameness increased in the first and second lactation periods. Lameness incidence in the first and second lactation periods is higher than in the third and upper lactation periods. Lameness incidence in the first lactation period is significantly higher than in the second lactation period and in the upper lactation period.

Key words: Lameness, Incidence, Season, Lactation Period, Cattle
A Non Invasive Surgical Technique to Vulva Labia for Treatment Of Pneumovagina in Dairy Cattle

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Poor perineal conformation, leading to pneumovagina and routine technique for treatment of this problem is Caslick's operation, that unable to reconstruct perineal body conformation and vulval angle declination.

Is the new technique able to treat pneumovagina permanently?

New technique was done in 15 Holstein-Friesian cows (3-6 years old) that affected to pneumovagina. After preoperative considerations, an elliptico-horizontal incision (3×5cm) created in middle of perineal body and an elliptico-vertical incision (3×7cm), created at 2-3cm below the vulvar commissure of vulva labia and then instead skins were undermined and discarded. Incisions sutured vertically with simple interrupted and horizontally with interrupted horizontal mattress pattern, respectively.

Length of perineum, vulva labia, distance between dorsal commissure of vulva labia to ischial arch and vulval angle declination measured at days 0, 14, 60, 150, 270, and 360 after the operations.

During the survey, three cows were omitted due to different causes. The remain cows show no signs of recurrence to the previous status and become pregnant after 1-2 times of artificial insemination.

According to the results, the new technique could be able to increasing length of perineum, decreasing distance between dorsal commissure to ischial arch considerably by pulling down the vulva labia, leads to amendment of vulval angle declination.

Key words: Vulva, Pneumovagina, Dairy Cattle
Incidence of Sole Ulcer and White Line Disease in Some Dairy Farms

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Hoof lesions have been reported as the main cause of dairy cattle lameness (90%) in most studies. Depending on geographical area claw horn or dental lesions are the main lesions of the hoof.

Current study has been done on 2 dairy farms consist of 2000 milking cows (1600 milking cow in dairy no one and 1100 milking cow in dairy no two, the average of milk production for both herds were recorded as 36 liters/day). Study was done during 12 month from October 2006–October 2007. Data from 3300 trimmed cows in farm 1 and 4000 trimmed cows from farm two was analyzed during the study. All new cases of sole ulcer and white line disease have been analyzed in according to reported farmers’ data.

One hundred and sixty two cases of sole ulcers recorded in farm one (9%) and 125 cases of white line disease recorded in farm two (6.94%). Annual incidence of 15.94% recorded for these two lesions. In farm two, 66 cases of sole ulcer (5.09%) and 205 cases of white line disease (18.9%) with annual incidence of 24% for both diseases have been recorded. Overall incidence of 7.51 for sole ulcer and 11.86% for white line disease has been recorded. Results show the annual incidence of 19% for these two lesions in current study.

Claw horn lesions are the main cause of the lameness in this area that in a high producing dairy farm needs proper diagnosis and treatment of the lesions. Low rate of culling from lameness in these herds shows proper diagnosis and treatment despite of its relatively high incidence. Special attention should be made to higher incidence of white line disease in this current study.

Key words: Sole Ulcer, White Line Disease, Dairy Farms
Association Between Digital Disorders and Reproduction Indices in Dairy Cows: Study on Farm Level

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This study was conducted in a dairy cow operation in the vicinity of Tehran due to the presence of predispositions such as high prevalence of lameness, well-recorded reproductive data and tendency of farm manager. It appears without saying that lameness is one of the main problems of dairy cow rearing industry, having undesired impacts on the other organs of the body. The main negative effects may be on the reproductive and productive systems. The objective of this study was to find an association between lameness and low fertility of such cows in this farm.

This prospective longitudinal study was carried out on 225 postpartum Holstein cows. Digital disorders were classified based on the 5-points lameness scoring system. Reproductive indices of such lame cows were also drawn from the reproductive data and were recorded in a pre-established questionnaire for later comparison with those of the healthy cows. Data were analyzed using Chi Square and Student "t" tests. The relative risk "R.R." for each of the indices was calculated considering 95% confidence interval.

Seventy-six out of 225 cows were diagnosed as lame during 30 months period. Digital dermatitis (26.9%) and sole ulcer (21.2%) were the most prevalent lesions. Reproductive indices including Days Open (193.94 vs. 115.28 days), Days to 1st Service (113.57 vs. 81.52 days), Calving Interval (454.73 vs. 392.26 days), Days In Milk (370.66 vs. 328.36 days), Services per Pregnancy for all cows (0.38 vs. 1.91) and for pregnant cows (2.28 vs. 1.71), First Service (33.9% vs. 62.9%) and Overall Conception Rates (31.43% vs. 55.16%) were found significantly different between the lame and healthy cows, respectively (p<0.000). The relative risk of negative rates of reproductive indices in lame cows were significantly higher than control group.

It was concluded that pain and stress due to digital lesions play a key role in suppressing observable behavioral changes which may render the cow into infertility. Pain may also makes the cow reluctant to be mounted by other cows and suppresses feed intake, leading to negative energy balance and a low BCS, specifically in postpartum cows. Thus, in order to mitigate the undesired effects of lameness on fertility and reproductive performance, early diagnosis and treatment of digital lesions is needed to be established.

Key words: Digital Disorder, Reproductive Indices, Dairy Cow
Radiographic and Ultrasonographic Studies on Tendon Injuries in Equine

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A total of 250 animals (182 horses and 68 donkeys) were admitted to surgery clinic, faculty of veterinary medicine, Cairo University with different forms of tendon injuries. They were subjected to air tendoscopy by injection of 1000cc of air subcutaneously 3 inches below the Coracohamans and 600cc into the distal forearm tendon sheath 2 inches proximal to the fetlock with application of tourniquet above the site of injection. Twelve limbs belonging to 10 donkeys and 2 horses were subjected to ultrasonographic examination. Scarring was done starting at the top of the metacarpus/metatarsus downward. The results indicated that the use of tourniquet for contrast radiography was beneficial as it gives better and well defined radiographic pictures in cases of adhesions, calcification, osteoporietic reactions and chronic septic tenosynovitis. Sonography revealed an irregular echogenicity and discrete hypoechoic areas due to hemorrhage or edema in cases of septic tendinitis and marked thickening with hypoechoic areas accompanied by loss of normal structural integrity in cases of chronic tendinitis. Repeated tendons demonstrated hypoechoic region with hemorrhage, edema and tissue disruption.

Key words: Radiographic, Ultrasonographic, Tendon Injuries, Equine