SCLEROSING ENCAPSULATING PERITONITIS (SEP) ASSOCIATED WITH INTESTINAL FOREIGN BODIES IN PUPPY A CASE REPORT

Siriluck Luckanahasaporn[1*], Nuanrat Nateetaweesak[1] , Tamolwan Anyamaneechareon, Luksamee Limpongsai[1], Akaru Likhitwatanachai[1]

ABSTRACT

Sclerosis encapsulating peritonitis (SEP) is a very rare disease in which fibrocollagenous membrane of visceral and small bowel become thickening and massive adhesion to parietal peritoneum.

A 3-month-old Pomeranian dog was presented with history of vomit, anorexia and absent of defecation for 2 days. Abdominal radiograph and ultrasound showed oral-sided gastrointestinal ileus and dilation, peritoneal effusion and jejunal foreign body with localized mesenteric steatitis. An exploratory laparotomy was performed and detected small intestinal plication with thick fibrous adhesion itself and multiple adhesion to parietal peritoneum. Biopsy specimens of intestinal lesions were submitted for histological examination. Histological revealed, mixed mature and immature collagenous connective tissue, and moderate number of neutrophil and diffusely of lacteal dilated. This pattern was similar with SEP in humans. While reviewing veterinary literature only few cases of SEP were founded on dogs. In this case study, We report the first case of SEP in pedriatric dog caused by intestinal foreign bodies in Thailand.

KEYWORDS: Sclerosing encapsulating peritonitis(SEP); Intestinal fereign bodies; Pedriatric dog; Peritonitis

[1]Arak Animal Hospital, Thonglor Branch, 99 Sukhumvit 55 Khlongtan nuea Watthana, Bangkok, Thailand 10110

*Corresponding author email address: Luckanahasaporn.S@gmail.com

PO-2

FROM ULTRASOUND DIAGNOSIS TO CHOLECYSTECTOMY WITH CHOLEDOCHAL TUBE STENTING: A SUCCESSFUL RESOLUTION OF POST-PANCREATITIS BILE DUCT OBSTRUCTION IN DOG : A CASE REPORT

Yawitta Dacha[1*] Chawapa Wattanaprateep[2]

ABSTRACT

An 11-year-old male Chihuahua presented to Thonglor Bangkok Pet Hospital, Vietnam with vomiting, depression, and icterus. Initial bloodwork revealed elevated liver enzymes (ALK, ALT, AST), hyperbilirubinemia, hyperglobulinemia, neutrophilia, and thrombocytopenia. Abdominal ultrasound showed hypoechoic hepatic parenchyma and gallbladder wall edema. Treatment began with amoxicillin-clavulanate 25 mg/kg intravenously every 12 hours, acetylcysteine 70 mg/kg intravenously every 6 hours, omeprazole 1 mg/kg intravenously every 12 hours, and maropitant 1 mg/kg intravenously every 24 hours. PCR confirmed Leptospirosis , Ehrlichia canis and Anaplasma infections, leading to a switch to doxycycline 10 mg/kg orally every 24 hours. Initial treatment improved liver enzyme and bilirubin levels, resolving vomiting and icterus. However, recurrence of icterus and vomiting occurred post-discharge. Subsequent bloodwork showed elevated liver enzymes, hyperbilirubinemia, and increased canine pancreatic-specific lipase. Ultrasound revealed focal hypoechoic pancreatic tissue, hyperechoic encapsular fat, and marked cystic and common bile duct dilation, indicating post-hepatic jaundice, extrabiliary obstruction, and pancreatitis. Due to the severity of the extrabiliary obstruction and the resultant lack of bile flow and pancreatitis, cholecystectomy with choledochal tube stenting was performed to address the obstruction and restore bile flow. Post-operatively, antibiotics, intravenously administered fluids, pain management, liver supplements, and a low-fat diet were administered. Blood profiles showed gradual improvement, with decreasing liver enzymes, bilirubin, and canine pancreatic-specific lipase, and resolution of icterus, resulting in a positive clinical outcome. This case demonstrates the successful integration of imaging diagnosis with surgical and medical management for complex hepatobiliary and pancreatic disease.

KEYWORDS: Cholecystectomy, Choledochal tube stenting, Canine pancreatitis , Extrabiliary obstruction , Post-hepatic jaundice

[1]Thonglor Bangkok Pet Hospital (HCMC , Vietnam)

[2]Thonglor Bangkok Pet Hospital (HCMC , Vietnam)

[*]Corresponding author email address: taifull23@gmail.com

PO-3

ENCAPSULATED GRANULOMA FORMATION DUE TO RETAINED SURGICEL® MIMICKING TUMOR RECURRENCE FOLLOWING LIVER LOBECTOMY IN A DOG

Jin Seok[1], Yujin Kim[1] and Sungin Lee[1*]

ABSTRACT

Surgicel®, an oxidized regenerated cellulose-based bioabsorbable hemostatic agent, is commonly used during surgery to control intraoperative bleeding. Although generally safe and effective, Surgicel has been associated with complications such as delayed absorption, granuloma formation, migration, and abscess development in human medicine. However, such complications have not been previously reported in veterinary medicine. This report describes the first veterinary case of encapsulated granuloma formation due to retained Surgicel following liver lobectomy in a dog. A 12-year-old intact female Shih Tzu underwent left-division liver lobectomy for hepatocellular carcinoma, during which Surgicel was intentionally left in place to ensure hemostasis. Three months postoperatively, computed tomography (CT) imaging performed for metastatic evaluation incidentally revealed a distinct encapsulated abdominal mass near the dorsal aspect of the splenic tail, raising initial concerns of metastatic disease or tumor recurrence. Surgical exploration identified a bluish, encapsulated mass corresponding to the CT findings, which was subsequently excised. Histopathological analysis confirmed granulomatous inflammation around retained Surgicel remnants. This case highlights that Surgicel retained after surgery may migrate and form encapsulated granulomas, closely mimicking tumor recurrence or metastatic disease. Veterinary surgeons and radiologists should therefore include retained Surgicel granuloma in the differential diagnoses for postoperative abdominal masses, particularly in patients with a history of neoplasia. Thorough surgical documentation, including details regarding Surgicel quantity and placement sites, as well as increased awareness of imaging characteristics associated with Surgicel retention, are essential to ensure accurate diagnosis, minimize unnecessary interventions, and prevent misinterpretation of postoperative imaging findings in veterinary patients.

KEYWORDS: Abdominal mass; Complication; Granuloma; Retained; Surgicel

[1]Department of Veterinary Surgery, College of Veterinary Medicine, Chungbuk National University, Cheongju, Republic of Korea

[*]Corresponding author email address: Sunginlee@chungbuk.ac.kr

PO-4

THE ICTERIC CAT WITH CHOLELITHIASIS: A CASE REPORT

Natcha Noknu[1*], Nichakarn Kanokviriyanan[2], Surachart Benjathammarak[3] Sataporn Phochantachinda[2], Somsak Wattananit[2]

[1]Graduate Diploma in Clinical Veterinary Science, Faculty of Veterinary Science, Mahidol University, Thailand
[2]Department of Clinical Sciences and Public Health, Faculty of Veterinary Science, Mahidol University, Nakhon Pathom, Thailand
[3]Prasu-Arthorn Animal Hospital, Faculty of Veterinary science, Mahidol University, Nakhon Pathom, Thailand
[*]Corresponding author email address: natchanoknu@gmail.com

An 8-year-old female domestic shorthair indoor cat, weighing 4.6 kg, was referred to Prasu-Arthorn Animal Hospital, Faculty of Veterinary Science, Mahidol University, Nakhon Pathom, Thailand, due to persistent vomiting. The cat had been vomiting twice a day for the past six days, with episodes occurring independently to meal times. On physical examination, the cat was conscious and responsive, with normal heart and lung sounds. However, the mucous membranes were pink and icteric, indicating jaundice. Abdominal palpation revealed discomfort, and radiographic imaging showed radiopaque calculi located in the cranial part of the abdomen. Further ultrasound examination confirmed the presence of calculi obstructing the common bile duct along with multiple gallbladder calculi.

Surgical intervention was performed the following day to decompress the bile duct, which included cholecystotomy, choledochotomy, and duodenotomy. Intraoperatively, the common bile duct was dilated and tortuous, with multiple choleliths primarily located within the duct. Multiple stones were removed from both the gallbladder and common bile duct. Stone analysis confirmed they were composed of calcium phosphate (CaP). While cholecystectomy is typically the treatment of choice for cholelithiasis, in this case, the complete obstruction of the common bile duct made performing choledochal catheterization and retrograde or normograde lavage impossible. As a result, the patency of the common bile duct was compromised. One month after the surgery, the cat showed no signs of surgical complications, and all vital signs remained stable. Ongoing monitoring is in place.

Cholelithiasis is rare in cats and presents a challenge in both diagnosis and treatment. Clinical signs and clinical pathology often overlap with those of other systemic diseases. Diagnostic imaging is essential for localizing the disease and guiding treatment. In our case, cholecystectomy concurrent with choledochotomy demonstrated good clinical success.

KEYWORDS: feline cholelithiasis; biliary duct obstruction; feline gall stone

PO-5

GIANT COMBINED HEPATOCELLULAR-CHOLANGIOCARCINOMA IN A DOG: A CASE REPORT

Nayoung Kim, Boram Kim, Jihea Yoo, Jaeho Cho, WanHee Kim*

ABSTRACT

Combined hepatocellular-cholangiocarcinoma (cHCC-CCA) is a rare primary hepatic tumor in dogs, and diagnostic features in this case are different from other reported cHCC-CCA cases. A 10-year-old 3.0 kg neutered male Maltese was referred to Seoul National University Veterinary Medical Teaching Hospital after an abdominal mass was found on radiographs. CT imaging revealed a giant multicystic mass, measuring 105 x 61 x 88 mm, occupying the entire abdominal cavity. The cranial mesenteric artery and its branches were running adjacent to the mass, initially raising suspicion of a tumor originating from the omentum or mesentery. The possibility of an atypical cystadenoma was also considered due to the mass's multicystic appearance and the unclear boundaries with the hepatic lobe. The dog showed only mild clinical signs such as abdominal distension and pain, with no significant abnormalities in blood work. Through the operation, abdominal mass resection and celiac lymphadenectomy were performed. The portion of the right medial liver lobe was resected with the tumor and the adhesion with the gallbladder was separated alongside the mass. Fluid obtained from cystic lesion of the mass was yellowish, with higher bilirubin concentration of 0.4 mg/dL compared to a serum bilirubin concentration of 0.21 mg/dL. Histopathological examination confirmed cHCC-CCA with narrow to incomplete excision and a mitotic count was 7 (per 2.37 sq mm). Based on the pathological findings, the dog is being treated with toceranib chemotherapy. This case suggests that cHCC-CCA can present as a giant multicystic mass with minimal connection to the liver and gallbladder.

KEYWORDS: Canine; Combined hepatocellular-cholangiocarcinoma; multicystic

Department of Veterinary Clinical Sciences, College of Veterinary Medicine and Research Institute for Veterinary Science, Seoul National University, Seoul, Republic of Korea

* Corresponding author email address: whkim@snu.ac.kr

PO-6

CLINICAL OUTCOMES OF TWO POSITION VENTRAL SLOT SURGERY IN CHRONIC LESION AND GERIATRIC CAININE: A CASE REPORT

Luddawon Somrup[1], Salisa Lertsrimongkol[1], Kanawee Warrit[2*]

ABSTRACT

A nine-year-old, 5 kg, male mixed-breed canine was referred to small animal hospital, Chiang Mai University with tetraparesis and cervical pain. Initial radiographs showed non-remarkable lesion and a three-month course of corticosteroid treatment was ineffective. The computed tomography (CT) with myelography was conducted, identifying intervertebral disc extrusion with spinal cord and nerve root compression between C2-3 and C5-6 vertebral segments. Degenerative disc changes were observed at the C3-4, C4-5, and C6-7 levels, alongside the presence of a bony bridge at the ventral vertebral body of C2-3, C3-4, C4-5, C5-6 and C6-7.

A Ventral slot decompression procedure was performed at the C2-3 and C5-6 levels to address spinal cord compression. The success of the surgical procedure was largely attributed to the careful and appropriate positioning and gentle surgical technique, which were essential in preventing brainstem herniation and subsequent apnea. The patient was recovered uneventfully without perioperative complication. Postoperatively, the patient regained weight-bearing capability in all four limbs within ten days. Following wound healing, acupuncture was initiated, and the neck mobility was improved.

This case highlight that the favorable treatment outcome could be achieved even in geriatric patients with chronic lesion and two cervical disc extrusions. This success can be attributed to several critical factors, including the use of appropriate diagnostic, the careful of surgical techniques, and the cooperation of acupuncture therapy.

KEYWORDS: Canine; Intervertebral disc; Tetraparesis; Ventral Slot

[1]#$small animal Hospital, Faculty of Veterinary Medicine, Chiang Mai University, Chiang Mai 50200, Thailand

[2]#Faculty of Veterinary Medicine, Chiang Mai University, Chiang Mai 50100, Thailand

[*]Corresponding author email address: Wait26@hotmail.com

PO-7

QUANTITATIVE ANALYSIS OF TIBIAL TUBEROSITY LATERALIZATION USING ARIX MODIFIED TPLO PLATE IN SMALL-BREED DOGS FOR TREATMENT OF CONCOMITANT CRUCIATE LIGAMENT RUPTURE AND MEDIAL PATELLAR LUXATION

Tae-Wan Kwon[1], Kyu-Won Kang[1] and Byung-Jae Kang[1,2]*

[1]Department of Veterinary Clinical Sciences, College of Veterinary Medicine and Research Institute for Veterinary Science, Seoul National University, Seoul 08826, Korea
[2]BK21 FOUR Future Veterinary Medicine Leading Education and Research Center, Seoul National University, Seoul 08826, Korea

*Corresponding author email address: bjkang81@snu.ac.kr

ABSTRACT

Cranial cruciate ligament rupture (CCLR) and medial patellar luxation (MPL) often coexist in small-breed dogs, requiring surgical intervention. Recently, an anatomically shaped modified tibial plateau leveling osteotomy (mTPLO) plate (Arix Vet; Jeil Medical Co., South Korea) has been introduced, but the degree of tibial tuberosity lateralization following mTPLO remains unclear. This study quantifies the extent of tibial tuberosity lateralization achievable with the ARIX mTPLO plate using computed tomography (CT) based analysis. Five tibial models derived from small-breed dogs (3–7 kg) were 3D-printed from CT scans. Two experimental groups were established: (1) a single bone model repeated test group (SR) and (2) a multiple bone model single test group (MS). mTPLO was performed using a standard TPLO plate and modified TPLO plates with +2 mm and +4 mm offsets. The lateralization distance of the tibial tuberosity (LDTT) was measured pre-and postoperatively. LDTT consistently remained lower than the intended offset across all conditions. In the SR group, LDTT values were 0.04 ± 0.23 mm (standard), 1.58 ± 0.15 mm (+2 mm), and 3.20 ± 0.04 mm (+4 mm). A similar trend was observed in the MS group, with LDTT values of -0.11 ± 0.43 mm (standard), 1.45 ± 0.42 mm (+2 mm), and 3.06 ± 0.41 mm (+4 mm). This discrepancy likely resulted from variations in plate contact at the distal tibial segment, which may have restricted proximal tibial movement. Additionally, a postoperative increase in the medial proximal tibial angle (mMPTA) was observed, differing from previous studies. These findings suggest that tibial morphology may influence LDTT, as the observed translation was consistently lower than the intended offset. This underscores the importance of individualized plate selection and meticulous preoperative planning to optimize mTPLO outcomes. Further, in vivo studies are required to validate these findings in clinical settings.

KEYWORDS: Cranial cruciate ligament rupture; Medial patellar luxation; Modified tibial plateau leveling osteotomy; Tibial alignment; Tibial tuberosity lateralization

PO-8

A CUSTOMIZED ROTATING-HINGED TOTAL KNEE REPLACEMENT COMBINED WITH 3D-PRINTED SURGICAL GUIDE FOR SEVERE STIFLE JOINT INSTABILITY IN A DOG

Junghyun Sung[1], SeungPyo Bae[1], Jongpil Yoon[1], Sanghyun Nam[1], Youngjin Jeon[1], Jaemin Jeong[1], Daehyun Kim[1], Seong-Mok Jeong[1], and Haebeom Lee[1*]

ABSTRACT

A 4-year-old intact male Siberian Laikas exhibited progressive left pelvic limb lameness over three months following a traumatic event, resulting in a complete non-weight-bearing state. Clinical and diagnostic evaluations confirmed severe stifle joint instability, including cranial and caudal cruciate ligament ruptures, bilateral collateral ligament compromise, and septic arthritis. Given the severity of ligamentous insufficiency and joint instability, a rotating-hinged total knee replacement (TKR) was elected to restore biomechanical integrity and functional mobility. A staged surgical approach was undertaken. The initial procedure was focused on the management of septic arthritis, involving arthroscopic debridement, joint lavage, and implantation of a gentamicin-impregnated collagen sponge. After three months of infection management with antibiotics based on sensitivity test results, computed tomography (CT) was performed. Using CT data, a patient-specific rotating-hinged TKR was designed and 3D-printed. The prosthesis was designed to provide intrinsic stability and controlled articulation, compensating for extensive ligamentous deficiency and joint instability. Osteotomy and bone preparation for implant placement were performed following a 3D-printed guide to enhance surgical accuracy. A rotating-hinged TKR was then implanted using a cemented fixation technique. Postoperative assessments were conducted at one, three, and six months, demonstrating progressive functional recovery. One month after surgery, mild weight-bearing lameness was observed, which improved to near-symmetric weight loading compared to the right pelvic limb by three months. At the six-month assessment, the patient exhibited a normal gait, including trotting ability. The radiographic analysis confirmed implant stability, with no evidence of migration or mechanical failure, and a range of motion comparable to the contralateral side. This case suggests the clinical applicability of a 3D custom-made rotating-hinged TKR for severe stifle joint instability, employing a 3D-printed surgical guide to ensure precise surgery and optimal implant alignment adapted to the patient's specific anatomical axis. While long-term durability remains undetermined, in this particular case, this implant design provided superior stabilization and mobility. Further investigations are warranted to assess long-term functional outcomes and implant longevity.

KEYWORDS: Rotating-hinged total knee replacement; Stifle joint instability; Total knee replacement

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[1]Department of Veterinary, Surgery, College of Veterinary Medicine, Chungnam National University, 99, Daehak-ro, Yuseong-gu, Daejeon, 34134, Republic of Korea.

[*]Corresponding author email address: Email: seatiger76@cnu.ac.kr

PO-9

MEDIAL PATELLAR LUXATION IN A PERSIAN CAT : A CASE REPORT

Pemika Vipabusabakorn[1], Phingphol Charoonrut[2]

ABSTRACT

A 9-month-old female Persian cat was presented with a two-week history of left hind limb lameness. Despite prior treatment with non-steroidal anti-inflammatory drugs (meloxicam, 0.1 mg/kg SID loading dose, followed by 0.05 mg/kg SID) and a joint care supplement, there was no improvement in the clinical signs. The cat was referred to an orthopedic specialty clinic, where a thorough examination diagnosed a Grade II left medial patellar luxation. Surgical correction was recommended to realign the patella and stabilize the joint, preventing further luxation and improving mobility. The procedure involved lateral joint imbrication and trochleoplasty. Postoperatively, the cat made a full recovery without complications, showing significant improvement in mobility, with no recurrence of lameness or dislocations at the 12-month follow-up. This case highlights the importance of early diagnosis and prompt intervention in preventing chronic pain and joint degeneration, ultimately improving outcomes and preserving long-term mobility.

KEYWORDS: Cat; Medial Patellar Luxation; Persian Cat; Trochleoplasty; Lameness; Orthopedic Surgery

Department of Global PetCare Innovation, i-Tail Corporation Public Company Limited, Thasai sub-district,Muangsamutsakhon District, Samut Sakhon 74000, Thailand. [1]
Department of Clinical Science and Public Health, Faculty of Veterinary Science, Mahidol University, Nakhon Pathom 73170, Thailand. [2]

*Corresponding author: Pemika.vipabusabakorn@thaiunion.com

PO-10

UNUSUAL CASE OF PNEUMOPERITONEUM IN A DOG CAUSED BY THE RUBTURE OF A *DIPYLIDIUM CANINUM*-ASSOCIATED GRANULOMA: A RARE PHENOMENON

Natcha Darayen [1*], Thapanee Chuenngam[2], Chaiyakorn Thitiyanaporn[1], Nutawan Niyatiwatchanchai[1]

ABSTRACT

This case report describes the first documented instance of pneumoperitoneum in a dog caused by the rupture of a Dipylidium caninum–associated granuloma. A 3-year-old Chihuahua presented with lethargy, anorexia, and abdominal distension. Diagnostic imaging confirmed pneumoperitoneum, prompting immediate stabilization and preparation for emergency exploratory surgery. Intraoperatively, a jejunal granuloma with an associated intestinal perforation was identified, containing segments of D. caninum. The affected section of the intestine was surgically resected, followed by intestinal anastomosis. Postoperatively, the dog received supportive care, including antimicrobial therapy and anthelmintic treatment with fenbendazole. Histopathological examination confirmed the presence of D. caninum within the granuloma, establishing parasitic migration as the underlying cause of perforation. The dog made a full recovery without complications, as confirmed by a two-month follow-up. This case highlights the importance of considering parasitic infections as a potential cause of pneumoperitoneum in veterinary practice, particularly in the absence of traumatic injury or other apparent sources of gastrointestinal perforation. Early recognition and prompt surgical intervention are crucial for achieving a successful outcome in such cases.

KEYWORDS : *Dipylidium caninum*; Fenbendazole; Intestinal granuloma; Pneumoperitoneum; Tapeworm

[1]Surgery Unit, Kasetsart University Veterinary Teaching Hospital, Bangkhen campus, Faculty of Veterinary Medicine, Kasetsart University, Bangkok 10900, Thailand.
[2]Dermatology Unit, Kasetsart University Veterinary Teaching Hospital, Bangkhen campus, Faculty of Veterinary Medicine, Kasetsart University, Bangkok 10900, Thailand.

*Corresponding author e-mail: Natcha.dar@ku.th

PO-11

ACUTE SPLENIC TORSION IN A MIXED-BREED DOG WITHOUT NEOPLASTIC DISEASE: CLINICAL AND SURGICAL FINDING

Natcha Darayen[1], Krittavit Hongchumpae[2], Garun Kumkanok[3], Boonyakorn Leelakarnsakul[4], Piyatip Chuchalermporn[4]

ABSTRACT

BACKGROUND: Splenic torsion is a rare but life-threatening condition in dogs, often leading to vascular compromise, splenic necrosis, and systemic complications. Early recognition and emergency surgical intervention are critical for a successful outcome. However, due to its non-specific clinical presentation, diagnosis can be challenging, and delayed treatment may result in severe complications, including organ infarction and sepsis.

CASE PRESENTATION: An 8-year-old mixed-breed dog presented with a two-day history of lethargy, acute abdominal pain, and sudden-onset hematuria. Physical examination revealed hemodynamic shock, necessitating immediate stabilization. Blood examination findings included anemia, thrombocytopenia, leukocytosis, and azotemia, suggesting systemic compromise. Abdominal radiography demonstrated a mid-abdominal mass effect, while ultrasonography revealed a lacy appearance of the spleen and multiple emboli within the splenic vein, strongly suggesting splenic torsion. Following intensive stabilization, an emergency exploratory laparotomy was performed, confirming splenic torsion without underlying neoplasia, and a splenectomy was successfully conducted. Histopathology revealed splenic necrosis and thrombosis with no evidence of malignancy. Postoperatively, the dog recovered well. However, follow-up monitoring detected renal infarction, though the dog remained asymptomatic at six months post-surgery.

CONCLUSION: This case underscores the importance of considering splenic torsion in dogs with acute abdominal pain, even in the absence of prior splenic disease. Advanced imaging and rapid surgical intervention are crucial for diagnosis and treatment, improving survival and long-term outcomes.

KEYWORDS : Lacy appearance; Splenic torsion; Infarction; Mixed-breed; Neoplasia

1Surgery Unit, Kasetsart University Veterinary Teaching Hospital, Bangkhen campus, Faculty of Veterinary Medicine, Kasetsart University, Bangkok 10900, Thailand.

[2]Surgery Unit, Chulalongkorn University Veterinary Teaching Hospital, Faculty of Veterinary Medicine, Chulalongkorn University, Bangkok 10330, Thailand.

[3]Emergency Unit, Kasetsart University Veterinary Teaching Hospital, Bangkhen campus, Faculty of Veterinary Medicine, Kasetsart University, Bangkok 10900, Thailand.

[4]Radiology Unit, Kasetsart University Veterinary Teaching Hospital, Bangkhen campus, Faculty of Veterinary Medicine, Kasetsart University, Bangkok 10900, Thailand.

*Corresponding author e-mail: Natcha.dar@ku.th

PO-12

CAESAR SECTION IN CASES OF DYSTOCIA IN CAT (*FELIS CATUS*) DUE TO INBREEDING

Shaeren Ratu Paras Elok[1], Sri Nur Farah Fauziyyah[1], Fauzan Aldo Pradana[1], Shafia Khairani[2], Fatimah Alydrus[3], Wong Aihuwa Diah Lestari[3], Pebi Diah Patmawati[3]

[1]Veterinary Professional Program, Faculty of Medicine, Padjadjaran University, [2]Department of Basic Medical Science, Faculty of Medicine, Padjadjaran University, [3]Klinik Hewan Maha Petcare, F06 and F20 Surapati Core, Jl. Kph. Hasan Mustofa, Pasirlayung, Cibeunying Kidul, Bandung, Indonesia.

ORCID ID author1: https://orcid.org/0009-0003-1712-1204
ORCID ID author2:
ORCID ID author3:
ORCID ID author4:
*Corresponding author: shafia@unpad.ac.id

ABSTRACT

Abstract Inbreeding is the mating between closely related individuals, particularly to preserve and enhance desired traits and to eliminate unfavorable traits from a gene. Inbreeding can lead to increased homozygosity, which is the rise of identical alleles inherited from a specific gene. This study discusses the case of a 2-year-old female mix breed cat diagnosed with dystocia at the Klinik Hewan Maha Pet Care, Bandung, West Java in September 2024. During the physical examination of the abdominal area through palpation, 3 fetuses were detected. The clinical symptoms observed in Late include lethargy. The cat is no longer showing any signs of straining. The diagnosis is confirmed through ultrasonography, hematology, and blood glucose tests. The ultrasonography showed that there are 3 kittens in the abdomen. Treatment is performed via cesarean section. Ovariohysterectomy was also performed in this case. Hematology and blood glucose tests were performed to determine whether the cesarean section procedure can be continued or not. Both tests showed a normal status of Late. During the procedure, one of the offspring showed an abnormal position, which was likely the cause of dystocia in this case. Three offspring were delivered alive and well and the mother, late also shows a good vital status.

Keyword : Caesar; Cat; Dystocia; Inbreeding.

PO-13

REAL-TIME DETECTION OF FELINE LIPOSARCOMA WITH SHORT-WAVE INFRARED FLUORESCENCE IMAGING AND INDOCYANINE GREEN

Jihun Kim[1], Yujin Kim[1] and Sungin Lee[1*]

ABSTRACT

A 9-year-old neutered male domestic short-haired cat was presented with a firm, palpable thoracic mass that was initially suspected to be a lipoma based on cytological findings. To improve intraoperative visualization and surgical precision, short-wave infrared (SWIR) fluorescence imaging was employed following the intravenous administration of 5 mg/kg indocyanine green (ICG). During surgery, two distinct masses were identified: a superficial, plaque-like mass and a deeper lesion. SWIR fluorescence imaging demonstrated intense fluorescence in the deeper mass, differentiating it from the superficial mass. Both were excised, and subsequent histopathological analysis confirmed that the superficial mass was a lipoma, while the deeper lesion was a well-differentiated liposarcoma. The cat recovered without complications, and follow-up assessments over nine months revealed no signs of recurrence or metastasis. This case underscores the effectiveness of ICG fluorescence imaging in distinguishing between benign and malignant tissues in real time, enhancing the precision of tumor removal. To our knowledge, this is the first documented instance of SWIR fluorescence imaging being used to identify feline liposarcoma. These findings support the potential for fluorescence-guided imaging as a valuable adjunct in oncologic surgery, improving tumor visualization and surgical outcomes in veterinary medicine. Future research is needed to further investigate its applications across different tumor types and species.

KEYWORDS: Indocyanine green; Image-guided surgery; Liposarcoma; Feline

[1]Department of Veterinary Surgery, College of Veterinary Medicine, Chungbuk National University, Cheongju, Republic of Korea

[2]Laboratory of Veterinary Surgery & Ophthalmology, College of Veterinary Medicine, Chungbuk National University, Cheongju, Republic of Korea

[*]Corresponding author email address: sunginlee@cbnu.ac.kr

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PO-14

A case report of urethrostomy in a chinchilla（*Chinchilla lanigera*）with urinary tract stones

Yongjun Zhang [1,a] Yuchen Zeng [2,a] Feng Yu *[2]

ABSTRACT

A 3-year-old male chinchilla (*Chinchilla lanigera*) presented with dysuria and hematuria. Radiographic imaging confirmed urinary calculi of various sizes in the bladder and urethra, including a 2.5 mm calculus embedded in the perineal urethra, causing urethral obstruction. Repeated retrograde flushing failed, necessitating a perineal urethrostomy combined with cystotomy. Postoperative management included fluid therapy, analgesics, antibiotics, and dietary modifications to prevent recurrence. This case represents the first documented case of urethrostomy in a chinchilla for urinary tract stones, highlighting the challenges of urinary obstruction management in this species.

KEYWORDS: Chinchilla; Urethral calculi; Urethrostomy; Urethral obstruction

[1]#Beijing Xiangyun Guanzhong Animal Hospital, Beijing, China

[2] College of Veterinary Medicine, China Agricultural University, Beijing, China

[a] These authors contributed equally to this work.

[*] Corresponding author email address: College of Veterinary Medicine, China Agricultural University, Beijing, China

PO-15

Temporary ureteral stenting using feline urinary bladder catheter after ureteroneocystostomy in 4.5 kg canine

Krittavit Hongchumpae[*], Natcha Darayen[2]

ABSTRACT

5 years old female canine presenting with dysuria after 10 days of ovariohystectomy for pyometra. After ultrasound is perform hydronephrosis and ureteral dilation is detect. Exploration laparotomy was perform and found ligated of left ureter at neck of urinary bladder. after ureteroneocystomy commercial feline urinary bladder catheter is use for stent and divert urine. After

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KEYWORDS: feline urinary bladder catheter; ureteral stenosis, urine diversion , ureteroneocystostomy;

[1][1]Surgery Unit, Chulalongkorn University Veterinary Teaching Hospital, Faculty of Veterinary Medicine, Chulalongkorn University, Bangkok 10330, Thailand

[2]Address……..

[*]Corresponding author email address: doskrittavit@gmail.com

PO-16

V-Y plazty technique reconstruction of a large wound defected at elbow after skin mass excision surgery : A Case Report

Atcharanee Tummawintorn[1*]

ABSTRACT

A 10-year-old female poodle presented with a 3.5 × 3.5 cm skin mass over the lateral aspect of the left elbow. A fine needle aspiration (FNA) performed by the referring veterinarian yielded inconclusive results. A biopsy was recommended for a definitive diagnosis. During the surgical procedure, a wide excision of the mass was performed, resulting in a 5 × 5 cm wound on the lateral side of the elbow. To facilitate wound closure, a V-Y plasty technique was employed, along with the placement of a Penrose drain for passive drainage. The wound was then covered with a sterile dressing.In the postoperative period, wound management was conducted following passive drainage protocols and primary wound closure principles. The functional and cosmetic outcomes were favorable, with no postoperative complications observed. Histopathological analysis confirmed the diagnosis of sebaceous epithelioma. Follow-up evaluations over a 36-month period showed no evidence of recurrence at the surgical site. The successful use of the V-Y plasty technique in this case suggests that it can be an effective option for reconstructing large wounds in the elbow region.

KEYWORDS: Elbow ; Skin mass ; V-Y plasty technique

[1]Graduate Bachelors degree in Doctor of Veterinary Medicine , Faculty of Veterinary Medicine , Khon Kaen Univerity , Thailand

[*]Corresponding author email address: atcharanee2530@gmail.com

PO-17

Evaluation of an Online Anesthesia Simulator for Preclinical Education of Veterinary Students

Ayano Kudo, Shintaro Kamo, Ryo Oshita, Akinori Yamauchi, Yuma Harada, Satoshi Takagi*

ABSTRACT

In the last decade, anesthesia simulators have been used in medical and veterinary preclinical education to minimize the number of live animals used and help students develop confidence and proficiency in anesthesia procedures [Jones *et al*., 2019, Amitrano *et al*., 2023]. However, these anesthesia simulators are designed for on-site training, and only few online materials are available for veterinary students to practice repeat anesthesia monitoring anytime. Furthermore, the educational effectiveness of these programs remains unclear. We have developed an online educational software that allows veterinary students to monitor anesthesia and evaluate its effects on their emotions and motivation to learn anesthesia. Fourth-year veterinary students from Azabu University were recruited for the study. They were divided into two groups: a text-learning group which received digital educational documents, and a simulator-learning group which received the same documents together with access to an online anesthesia simulation tool developed by the Laboratory of Small Animal Surgery at Azabu University. Both groups studied using these materials for 2 weeks before completing a questionnaire to evaluate their learning experience. Each group had a total of 32 students. The simulator learning group rated the learning experience higher in terms of understanding the anesthesia monitoring data and for recognizing changes in monitoring data in response to abnormal conditions. Additionally, students in the simulator group reported more positive emotions during the learning, greater motivation to continue using the educational materials, and a higher self-assessment of their anesthesia skills. These results suggest that online anesthesia simulators have the potential to complement traditional teaching methods through experiential learning, particularly by improving the understanding of dynamic changes in anesthesia-monitoring values and by promoting continuous learning.

KEYWORDS: Anesthesia; Education; E-learning; Motivation; Simulator

Laboratory of small animal surgery, Department of veterinary medicine, Azabu University, 1-17-71, Fuchinobe, Chuo-ku, Sagamihara, Kanagawa, Japan#

*Corresponding author email address: s-takagi@azabu-u.ac.jp

PO-18

EFFECTS OF INCREASED INTRA-ABDOMINAL PRESSURE ON EXOGENOUS CREATININE CLEARANCE IN DEXMEDETOMIDINE-ALFAXALONE AND ISOFLURANE ANESTHETIZED DOG

Minjun Seo, Dongseok Kim, Sung-Ho Yun, Young-Sam Kwon and Min Jang*

ABSTRACT

This prospective crossover study evaluated the effect of increased intra-abdominal pressure (IAP) on exogenous plasma creatinine clearance in healthy dogs anesthetized with dexmedetomidine-alfaxalone and isoflurane. Five clinically healthy Beagle dogs (three intact females, two intact males) were enrolled. Each dog underwent three conditions: control (CC), and IAP increased to 10 mmHg (IAP10) and 20 mmHg (IAP20) via CO_2 insufflation, with a 7-day washout between sessions. Anesthesia was induced with dexmedetomidine (5 μg/kg) and alfaxalone (2 mg/kg) IV, and maintained with isoflurane (Fe' Iso: 1.6%). Hemodynamic parameters including heart rate (HR), systolic arterial pressure (sAP), oxygen saturation (SpO_2), end-tidal CO_2 (Pe' CO_2), esophageal temperature (Teso), respiratory rate (fR), tidal volume (VT), cardiac output (CO), stroke volume (SV), and systemic vascular resistance (SVR) were monitored. Exogenous creatinine (80 mg/kg IV) was administered, and blood samples were collected from jugular and dorsal pedal sites at baseline and up to 600 minutes. Baseline plasma creatinine was 0.72 ± 0.07 mg/dL, with a strong correlation between venous and arterial samples ($r = 0.993$). Creatinine clearance was 3.76 ± 0.47 (CC), 3.94 ± 0.58 (IAP10), and 3.84 ± 0.60 mL/kg/min (IAP20), with no significant differences ($p = 0.929$). Increased IAP significantly raised HR, sAP, Pe' CO_2, fR, and SVR, while Teso, CO, SV, and VT decreased ($p < 0.05$). Despite these hemodynamic changes, creatinine clearance remained stable, and venous sampling proved interchangeable with arterial sampling in these healthy anesthetized dogs.

KEYWORDS: cardiac output; creatinine clearance; dexmedetomidine; dog; intra-abdominal pressure

Department of Veterinary Surgery, College of Veterinary Medicine, Kyungpook National University, Daegu, Republic of Korea

*Corresponding author email address: jangmin@knu.ac.kr

PO-19

ASSESSMENT OF THE EFFICACY OF POLYHEXAMETHYLENE BIGUANIDE WITH TRIS-EDTA FOR BACTERIAL REDUCTION IN CANINE PRE-SURGICAL SKIN PREPARATION

Nithida Boonwittaya[a], Chompoonek Yurayart[b] and Taksaon Duangurai[c*]

[a] Surgery Unit, Kasetsart University Veterinary Teaching Hospital, Faculty of Veterinary Medicine, Kasetsart University, Bangkok 10900, Thailand

[b] Department of Microbiology and Immunology, Faculty of Veterinary Medicine, Kasetsart University, Bangkok 10900, Thailand

[c] Department of Companion Animal Clinical Sciences, Faculty of Veterinary Medicine, Kasetsart University, Bangkok 10900, Thailand

* Corresponding author

E-mail address: taksaon.du@ku.th (T. Duangurai)

Abstract

Surgical site infections (SSIs) are a major concern in veterinary medicine, often originating from endogenous skin microflora such as *Staphylococcus pseudintermedius*. Traditional antiseptics have been widely used, but the rise of antibiotic-resistant bacteria raises concerns about their long-term efficacy. Polyhexamethylene biguanide (PHMB) and Tris-EDTA offer an alternative by disrupting bacterial cell walls and enhancing bacterial elimination. This study evaluates the efficacy of PHMB with Tris-EDTA (PHMB+Tris-EDTA) in bacterial reduction on pre-surgical skin preparation in dogs while also identifying bacterial diversity and antimicrobial resistance profiles. Nine client-owned dogs underwent pre-surgical skin preparation with PHMB+Tris-EDTA. Bacterial samples were collected before, 3 minutes, and 60 minutes post-application. Samples were cultured for bacterial identification using MALDI-TOF MS, and antimicrobial resistance was assessed by the disk diffusion method. Colony-forming units (CFUs) were quantified to evaluate bacterial reduction effectiveness. Pre-antiseptic samples showed 100% bacterial growth, with *S. pseudintermedius* being the most common isolate. One *S. pseudintermedius* isolate was methicillin-resistant, and one *Macrococcus canis* isolate was multidrug-resistant. After 3 minutes, only 22% of samples showed bacterial growth, which further decreased to 11% at 60 minutes. Bacterial counts significantly declined post-treatment ($p < 0.01$). No adverse skin reactions were observed. In conclusion, PHMB+Tris-EDTA was highly effective for canine pre-surgical skin preparation, significantly reducing bacterial counts. However, complete bacterial elimination was not achieved. Future research should assess its effectiveness in a larger population, over extended time periods, and in clinical surgical settings to confirm its suitability for preventing SSIs and optimizing preoperative asepsis in veterinary surgery.

Keywords: Antisepsis; dogs; polyhexamethylene biguanide; pre-surgical skin preparation; tris-EDTA

PO-20

BILATERAL SKIN-FOLD ADVANCEMENT FLAPS FOR A CHRONIC DORSAL LUMBAR WOUND CLOSURE IN A CAT

Nithida Boonwittaya[a*], Sakunrat Khathatip and Selapoom Pairor[b]

[a] Surgery Unit, Kasetsart University Veterinary Teaching Hospital, Faculty of Veterinary Medicine, Kasetsart University, Bangkok 10900, Thailand

[b] Department of Companion Animal Clinical Sciences, Faculty of Veterinary Medicine, Kasetsart University, Bangkok 10900, Thailand

* Corresponding author

E-mail address: nithida.bw@gmail.com (B. Nithida)

Abstract

Skin-fold advancement flaps (SFAFs) are a well-established reconstructive technique for closing large skin defects, particularly in dogs and cats. While SFAFs are commonly utilized for defects adjacent to the proximal limb or lateral trunk, their use for dorsal lumbar wounds is rarely reported. This case describes the successful application of bilateral SFAFs to close a chronic dorsal lumbar defect in a cat. A 4-year-old female domestic shorthair cat was referred with a nearly of 4-year history of a chronic dorsal lumbar wound that was unresponsive to fluorescent light energy therapy and local wound management. Histopathology confirmed chronic granulation tissue, and tissue culture was negative for bacterial or fungal growth. The defect, measuring 15 × 15 cm, was too large for primary closure. Bilateral flank-fold SFAFs were designed, with U-shaped incisions extending from the median to the lateral aspects of the proximal hindlimbs, and crescent-shaped distal flap edges positioned proximal to the stifles. The median incision was extended dorsally to connect with the caudolateral defect margin. The skin flaps were elevated, rotated, and sutured into place, with a Jackson-Pratt closed suction drain placed for fluid management posoperatively. The cat recovered uneventfully, with complete skin flap survival. The drain was removed on postoperative day 5, and sutures were removed on day 10. The excellent survival of the flap can be attributed to its robust blood supply from the ventral branch of the deep circumflex iliac artery. Furthermore, the inherent elasticity of feline skin facilitates the advancement of flaps harvested from this region, enabling tension-free coverage of distant defects, including those in the dorsal lumbar area. This case highlights the versatility of bilateral SFAFs in the successful reconstruction of extensive dorsal lumbar wounds, broadening the scope of reconstructive options for complex feline wound management.

Keywords: Cat; chronic wound; dorsal lumbar; skin flap; skin-fold advancement flaps

PO-21

INTEGRATION OF LASER THERAPY WITH SHORTENING AND ANASTOMOSIS SURGERY FOR MANAGING CHRONIC ACHILLES TENDON RUPTURE IN A DOG

Kannika Wanapinit1*, Monchanok Vijansorn2
1Kasetsart University Veterinary Teaching Hospital (KUVTH) Bangken, Bangkok, Thailand
2Kasetsart University Veterinary Teaching Hospital (KUVTH) Bangken, Bangkok, Thailand
*Corresponding author, kannika.wana@ku.th

ABSTRACT

Achilles tendon rupture is a common traumatic injury that often necessitates surgical repair with primary anastomosis using traditional suture patterns. In dogs, treatment typically involves both surgical and non-surgical approaches. This report describes the management of a chronic Achilles tendon rupture using tendon shortening and anastomosis surgery combined with laser therapy to enhance healing.

A 7-year-old male Rottweiler presented with a chronic left Achilles tendon rupture persisting for one month. Ultrasonography showed a heterogeneous left calcaneal tendon with a 1 cm lesion containing fluid and minimal surrounding effusion. Achilles tendon Z-lengthening and anastomosis with a Bunnell suture pattern were performed, along with Type 2 External Skeletal Fixation (ESF) for stabilization. Postoperative management included daily laser therapy until stitch removal, followed by weekly sessions until ESF removal at one month. By the second postoperative month, the dog could bear weight, and the range of motion of the affected limb closely resembled that of the normal limb. Ultrasonography at two months revealed reduced fluid accumulation and heterogeneous swelling at the anastomosis site. Nearly one year post-surgery, the anastomosis site had fully healed.

Combining Achilles tendon shortening and anastomosis surgery with laser therapy yielded favorable outcomes, restoring normal limb function without lameness.

KEYWORDS: Achilles tendon; anastomosis; laser therapy; rupture; shortening