

中華民國比較病理學會
九十五年度第三十七次比較病理學研討會

疫苗、免疫與其它相關病例



主辦單位：中華民國比較病理學會

國軍桃園總醫院

時 間：中華民國九十五年七月八日 (星期六)

地 點：桃園縣龍潭鄉中興路 168 號

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中華民國比較病理學會九十五年第三十七次比較病理學研討會
(疫苗、免疫與其它相關病例)

議程表

時間：中華民國九十五年七月八日（星期六）上午 08：40~下午 15：00
地點：國軍桃園總醫院（第二階梯教室）
地址：桃園縣龍潭鄉中興路 168 號 TEL: 03-2623301 (<http://www.aftygh.gov.tw/>)
主辦單位：中華民國比較病理學會、國軍桃園總醫院

時 間	議 程
08:40~09:00	報 到
09:00~09:20	主席致詞
09:20~09:50	<div> <div> 【專題演講】 Study on vaccination of cervical cancer </div> <div> 桃園總醫院病理檢驗部 張俊梁 主任 </div> </div>
09:50~10:10	Coffee Break
10:10~10:40	<div> <div> 【專題演講】 Cell block 細胞蠟塊 之製作與應用 </div> <div> 耕莘醫院病理科 孫政宏 醫師 </div> </div>
10:40~11:10	<div> <div>病例討論 Case 255</div> <div>國立台灣大學獸醫學系 許哲銘 獸醫師</div> </div>
11:10~11:40	<div> <div>病例討論 Case 256</div> <div>耕莘醫院病理科 孫政宏 醫師</div> </div>
11:40~12:10	<div> <div>病例討論 Case 257</div> <div>花蓮慈濟醫院病理科 許永祥 主任</div> </div>
12:10~13:30	午餐 (中華民國比較病理學會理監事會議)
13:30~14:00	<div> <div>病例討論 Case 258</div> <div>高雄醫學大學附設中和醫院病理 科陳欣宏 醫師</div> </div>
14:00~14:30	<div> <div>病例討論 Case 259</div> <div>彰化基督教醫院病理科 戴蕙君 醫師</div> </div>
14:30~15:00	綜 合 討 論

Comparative Pathology Case 255

Contributors: Che-Ming Shu (許哲銘), DVM; Yi-Cheng Chang(張益誠) DVM, MS, Chung-Tiang Liang(梁鍾鼎) DVM, MS, Chen-Hsuan Liu (劉振軒), DVM, PhD.

Graduate Institute of Veterinary Medicine, National Taiwan University.

Clinical History:

The three gray foxes had been immunized with Canine Distemper virus-Adenovirus type 2-Parainfluenza virus-Parvovirus modified live vaccine. After vaccination, the three vaccinated foxes subsequently showed anorexia, diarrhea, seizures, and all died in a period of 2-3 weeks.

Diagnosis: Vaccine-induced canine distemper, gray foxes (*Urocyon cinereoargenteus*).

Gross Findings:

At necropsy, the left lungs had multiple red-brown foci about 0.1 cm in diameter. The right lungs were diffusely, red-brown, firm, and heavy. The right atrium and ventricle of the heart was dilated. The liver was yellow. Other organs were grossly normal.

Histopathological Findings:

The main lesions in the medulla oblongata show marked neuronal necrosis accompanying by gliosis, perivascular lymphocytic cuffings, and spongy change suggestive of demyelination. No recognizable intranuclear/cytoplasmic inclusion bodies are detected. The above lesions in the CNS vary from section to section. Immunohistochemistry for canine distemper demonstrates positive stain which also correlates with the lesions.

Laboratory Results:

1. RT-Polymerase chain reaction: Positive signal in canine distemper was detected.
2. Immunohistochemistry stain for canine distemper virus: Positive signals were observed in the cerebrum, cerebellum, medulla oblongata, kidney, liver and lung.

Discussion:

Canine distemper virus is a member of the genus *Morbillivirus* in the family *Paramyxoviridae*. Canine distemper has been recorded in domestic dogs for centuries. It is now recognized as a worldwide problem of carnivores and has the second highest fatality rate of any infectious disease, after rabies, in domestic dogs. The importance of this disease in nondomestic animals has become evident with vaccine-induced infections in a variety of species and large-scale epidemics in captive and free-ranging felids. To date, canine distemper has been reported in many families of terrestrial carnivores include: Canidae, Felidae, Hyaenidae, Mustelidae, Procyonidae, Ursidae, and Viverridae.

During the first half of this century, canine distemper (CD) was the most common fatal disease in dogs worldwide. Inactivated canine distemper virus (CDV) vaccines which were available since the 1940's did not control the disease. A dramatic change was seen in the 1960's when modified live CDV vaccines became available. For some years thereafter it appeared that CD was under control. In recent years the incidence of distemper in dogs appears to have increased, which may be the result of insufficient vaccination and/or vaccination failures.

With few exceptions the modified-live CDV vaccines available today are derived from either avian cell or canine cell culture adaptations. Both methods of adaptation produce vaccines that are very effective in inducing an immunity that lasts for at least 1 year and probably for several years in most dogs. There are minor disadvantages to both products: Canine cell-adapted strains immunize virtually 100% of susceptible dogs but sporadically may induce post-vaccinal encephalitis. The avian cell-adapted strains are safer for dogs, but the onset of the immune response in dogs may be 2 or 3 days later than with the canine cell-adapted vaccines, and not all susceptible dogs may become immunized. Any modified live CDV vaccine may be fatal for certain wildlife and zoo animals (e.g. red pandas or black footed ferrets). Inactivated virus vaccines must be used in these species.

Post-vaccinal CDE develops 1 to 2 weeks after routine vaccination and is manifested by aggressive and violent behavior, progressive ataxia and paresis, recumbency, and death in a few days. Lesions are disseminated but most pronounce in the pontine gray matter and are characterized by malacia, numerous spheroids, and abundant neuronal inclusions. Such episodes are sometimes associated with a particular batch of a multivalent vaccine that includes modified live CDV and are probably due to inadequate attenuation of

the CDV component. Subclinical viral infection-for example, with canine parvovirus-may also explain occasional incidents of vaccine induced disease.

Diagnostic Criteria:

1. History: injection with modified live CDV vaccine, recently.
2. Clinical signs: anorexia, diarrhea, seizures, and sudden death in a period of 2-3 weeks.
3. Histopathology: Marked gliosis, perivascular cuffing, and infiltration of a few lymphocytes and plasma cells are observed in the cerebrum and cerebellum and medulla oblongata. Occasionally, eosinophilic intranuclear inclusion bodies are present in brain, bronchiolar epithelium, stomach and urinary bladder epithelium.
4. Determination of canine distemper virus antigens by immunohistochemistry.
5. Use polymerase chain reaction to isolate canine distemper virus DNA and alignment with sequences are homogenous with canine distemper vaccine strain.

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Comparative Pathology Case 256

Contributors: Jeng-Hung Suen (孫政宏), Fur-Jiang Leu (呂福江), Chia-Ing Jan (詹佳穎), 江蓉華, 林進耀, 陳梓泓, 廖俊厚

財團法人天主教耕莘醫院病理科

Clinical History:

A 54-year-old woman was healthy until she suffered from left flank pain (off-and-on) with hematuria (one time) and epigastric pain for one month in June 2005. She visited LMD for help but the symptoms (epigastric pain with nausea and vomiting, left flank pain, and low grade fever) persisted. She came to Chang-Gung Memorial Hospital for further treatment. The sonogram showed a huge tumor in left adrenal gland and operation was suggested. She came to our OPD because the operation schedule arranged by CGMH is too late for her then she was admitted to our ward for surgical intervention (laparoscopic operation) on 2005/6/16. The CBC, SMAC, and assays for hormone study (cortisol, aldosterone, ACTH, PRA, and VMA) are all within normal limit.

The pathology exam proved adrenal cortical carcinoma with vascular and capsular invasion, measuring 10.5 x 7.5 x 6.5 cm and weighing 290 gm. The post operation course is smooth and she was regular followed up in our OPD.

A hepatic cyst, 1.7 x 2.4 cm, was noted in sonogram on January 2006. Close follow up is suggested by the urologist. The abdominal CT scan performed on April 2006 showed a right hepatic tumor in right lobe, 1.6 x 2 cm, and the radiologist favor metastatic carcinoma. MRI (2006/5/3) further proved a hepatic tumor in S6-7 of right lobe. Then she was admitted to our ward again for core biopsy of hepatic tumor on 2006/5/8 and proved metastatic carcinoma, compatible with adrenal cortical origin. Laparoscopic partial hepatectomy was performed on 95/5/27.

Diagnosis: Metastatic adrenal cortical carcinoma.

Gross findings:

The specimen submitted consists of a piece of liver, measuring 6 x 4.5 x 2.8 cm, fixed in formalin. Grossly it shows a white to yellowish multilobulated tumor, measuring 4.3 x 4 x 2.5 cm. The surgeon records "hepatic tumor, S7, R/O metastatic tumor" on requesting sheet without mention past history.

Histopathological Finding:

Sections show carcinoma with anaplastic tumor cells arranged in trabecular and acinar growth pattern. The tumor cells have abundant eosinophilic cytoplasm, pleomorphic nucleus with frequent prominent and large nucleoli. Mitoses are frequently found, some of which are atypical (tripolar). The adjacent liver parenchyma shows no evidence of hepatitis nor fibrosis. Hemorrhage and necrosis are present in many areas.

Histochemical and Immunohistochemical Stains:

Reticulin --- widened trabecular pattern.

Melan-A and alpha-inhibin --- Positive, diffuse and strong.

Calretinin and synaptophysin --- Positive, focal.

Chromogranin A, CK (AE1/AE3), CK7, CK20, hepatocyte, CD10, AFP --- Negative.

Laboratory Results:

Assays

VMA (24 hrs urine): 5.53 mg/day

Cortisol (serum, 4 pm): 15.35 ug/dl

ACTH (plasma): 32.9 pg/ml

PRA (Plasma Renin Activity): 0.97 pg/ml/hr

Aldosterone (serum): 101 pg/ml

CBC/DC: WNL

Biochemistry (sugar, Ca, BUN, Cr, Na, K, Cl,

AST, ALT): WNL

Reference interval

(1-7.5)

(3.1-16.7)

(9-52)

(立 1.3-3.9;臥 0.2-2.3)

(立 70-350;臥 12-150;隨時
37-240)

Discussion:

Adrenal cortical carcinoma is a rare tumor and occurs in 1 per 1 million population.¹ Most series report a predilection for females.² It typically presents in fourth and fifth decades of life; less common in pediatric population.³ The common symptoms and signs includes abdominal or flank tenderness, palpable abdominal mass, hormone oversecretion, and evidence of distant metastasis. The most common hormone imbalance are glucocorticoid and androgen (increased testosterone in female).¹ ACTH-independent cortisol oversecretion may be demonstrated by elevated cortisol that is not suppressible with high dose of dexamethasone and is associated with undetectable plasma ACTH level. Urine VMA (metabolite of catecholamine) is not elevated (typically seen in pheochromocytoma, a tumor of adrenal medulla origin).

Grossly, it usually show a large tumor weighing between 100-1000 gm. Extension into adjacent soft tissue or surrounding organs is common. The cut surface often shows extensive hemorrhage and necrosis.

The most common architectural pattern is that of patternless sheets of cells interrupted by a fine sinusoid network. Other common patterns include broad trabeculae with anastomosing architecture, alveolar architecture, or large nests of cells. Architectural and cytologic features that recapitulate the normal adrenal cortex may be found.

Immunostaining profiling may be helpful in separating adrenocortical carcinoma from renal cell and hepatocellular carcinoma, adrenal medullary and metastatic tumors.¹ Immunoreactivity for alpha-inhibin and anti-Melan A (A103) antibody is sensitive for adrenal cortical carcinoma. They are usually negative for chromogranin A, a most reliable marker for discriminating them from pheochromocytoma.⁴

The differential diagnoses include adrenal cortical adenoma, pheochromocytoma, renal cell carcinoma, and hepatocellular carcinoma.³

The major differential diagnosis is with adrenal cortical adenoma, but the histopathological criteria for distinguishing benign from malignant adrenocortical neoplasm is complicated and proposed by many authors.^{5,6,7,8} Histologic criteria that are consistently useful across the classification systems include the mitotic rate, and the presence of vascular or capsular invasion.

The most common sites of metastasis are liver, lung, retroperitoneum lymph nodes, and bone.⁹ Invasion through renal veins and the inferior vena cava can proceed up to the right atrium and result in metastatic tumor embolus

to the lung.¹⁰

The American Joint Committee on Cancer (AJCC) or International Union Against Cancer (UICC) do not recognize a specific staging system for adrenal cortical carcinoma.¹ The staging system modified by Sullivan et al. is the system most commonly in use.¹¹ The majority of cases present with Stage IV disease, with about 40% of cases presenting with distant metastasis.¹²

Diagnostic Criteria:

1. Marked nuclear pleomorphism , hyperchromatia, and numerous mitotic figures, including atypical mitoses
2. Broad trabecular growth pattern with infiltrative border
3. Irregularly shaped sinusoidal channels with flattened endothelial lining
4. No cirrhotic change in adjacent liver tissue (usually seen in hepatoma)
5. Past history and immunostain profiling:

Positive for Melan-A and alpha-inhibin → C/W adrenal cortical tumor

Negative for Chromogranin A → Pheochromocytoma is not likely

Negative for CK, CK7, CK20 → Metastatic adenocarcinoma from GI tract, breast, lung is not likely (although hepatoma can show similar picture)

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Comparative Pathology Case 257

Contributors: Yung-Hsiang Hsu (許永祥), Rong-Long Chen (陳榮隆)

Department of Pathology & Pediatric, Buddhist Tzu-Chi General Hospital

Clinical History:

A 5-year-old boy was diagnosed stage I Burkitt's lymphoma of tonsil in 1997. Chemotherapy was subsequently administered, the treatment including vincristine 1.5 mg/m² weekly (seven doses from day 1), epirubicin 40 mg/m² and cyclophosphamide 750 mg/m² (three doses on day 1, 22 and 43), plus oral prednisolone 40 mg/m² (daily for seven weeks and tapered off over one week). Additionally, triple intrathecal chemotherapy with 12 mg methotrexate, 12 mg hydrocortisone, and 24 mg cytarabine in combination was administered five times during this period. Thereafter, the patient received maintenance chemotherapy with oral mercaptopurine 50 mg/m² daily and methotrexate 25 mg/m² weekly for 24 weeks, as well as the triple intrathecal chemotherapy described above a further five times. No radiotherapy was administered. There had been no recurrence of lymphoma three and a half years after diagnosis.

The patient was, however, readmitted due to severe ataxia 19 months post-chemotherapy. Cerebellitis secondary to viral infection was the initial impression, although atrophy of the cerebellum, dilatation of the fourth ventricle, and multiple infarction of the paratrigenal region was subsequently revealed from brain MRI. At 29 months post-chemotherapy, medical assistance for ataxia was sought for the patient's younger brother (aged 20 months). A diagnosis of ataxia telangiectasia was confirmed, with elevated serum α -fetoprotein (332.66 and 129.43 ng/ml, for the patient and younger brother, respectively) and undetectable immunoglobulin A level (detection limit was 6.67 mg/dl) determined for both siblings at this time. Mild bulbar telangiectasia was only noted for the older brother, who became dependent on a wheelchair 36 months post-chemotherapy.

Progressively increased levels of respiratory distress necessitated more and more visits to clinics and hospital admissions during the third year post-chemotherapy. Interstitial pulmonary infiltration was first noted from chest X-ray 31 months post-chemotherapy, with chest CT scans at 35 months

post-chemotherapy revealing diffuse interstitial infiltrations of the lungs bilaterally. A series of microbiological work-ups were performed and no evidence of pneumocystis carinii, mycobacteria tuberculosis, cytomegalovirus, or other microbial infections was detected from induced sputum and bronchoalveolar lavage. The pathology of the transbronchial lung biopsy revealed diffuse interstitial pulmonary fibrosis. The patient was dyspneic with hypoxemia even at rest and dependent on continuous oxygen supplementation from 36 months post-chemotherapy. A course of prednisolone therapy was administered. The respiratory distress was subjectively improved with home oxygen supplement (nasal cannula 2 L/min). Unfortunately, his respiratory distress continued to increase progressively, and he became totally dependent on ventilator support from 41 months after chemotherapy. He died soon after an episode of ventricular fibrillation 1.5 months after he began to regular total ventilator support.

Diagnosis: Severe lung fibrosis after chemotherapy in a child with Ataxia-Telangiectasia

Gross Finding:

At autopsy, the body weight was 28.5 kg and body length was 123 cm. Puffy face, pitting edema and marked petechia of chest wall was prominent. Opening the chest and abdominal wall, 100 C.C of right serous pleural effusion, 50 C.C of serous left pleural effusion and 50 C.C serous ascites were obtained. Right pleura was coated with fibrinopurulent exudate. Bilateral lungs were marked elastic firm. On cut, marked interstitial fibrosis and honey combs formation were found. The heart was dilated especially right side with RVH (0.5 cm in thickness). The liver weighed 650 gm. On cut, nutmeg liver with background fatty change was prominent. Removed the brain, the brain weighed 1140 gm. Prominent cerebellum atrophy was noted. On serial section, small hematoma of left frontal lobe and right temporal lobe was seen.

Histopathologic Finding:

It showed hypoplastic embryonic thymus without cortico-medullary differentiation accompanied dysplasia of epithelial cells. In addition, lymphocyte depletion involved lymph node, spleen and G-I tract. Above the pictures, it was consistent with immune deficiency clinically. The cerebellum

showed loss of Pürkinje and granule cells which was consistent with ataxia-telangiectasia. The lungs showed marked interstitial fibrosis with mild lymphocyte infiltration and honey-combs formation. Lipid pneumonia, multiple focal hemorrhage and fibrinous exudate formation were also noted. The complicated pulmonary hypertension characterized by vessel wall proliferation was noted. This complication resulted in cor pulmonary. Then nutmeg liver formed.

Discussion:

Ataxia- telangiectasia is an autosomal recessive disorder characterized by progressive cerebellar ataxia, telangiectasia and immunodeficiency. Patients with A-T are cancer –prone and radiation –sensitive. The discordance between the onset of ataxia and telangiectasia usually results in delayed in diagnosis of as long as several years. Early diagnosis of A-T in children with lymphoid malignancy can anticipate the severe toxicities of chemotherapy avoid confusing the development of ataxia and facilitate genetic conseling.

The development of severe lung fibrosis in this patient was probably caused by the synergistic interactions of the chemotherapy and underlying A-T.

In conclusion, further modification of chemotherapy might be considered for patients with A-T who have malignancies.

Diagnostic Criteria:

Diagnosis of A-T relies upon clinical findings, including slurred speech, truncal ataxia, oculomotor apraxia, family history, and neuroimaging. Testing that supports the diagnosis includes serum alphafetoprotein concentration, which is elevated in more than 95% of individuals with A-T; identification of a 7;14 chromosome translocation on routine karyotype of peripheral blood; the presence of immunodeficiency; and in vitro radiosensitivity assay. Molecular genetic testing of the *ATM* gene is available on a clinical basis. If the clinical diagnosis can be established with certainty, linkage analysis may be used for genetic counseling of at-risk family members if the specific disease-causing mutations cannot be identified in an affected family member.

References:

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Comparative Pathology Case 258

Contributors: Hsin-hung Chen (陳欣宏) MD; Kun-bow Tsai (蔡坤寶) MD; Chee-yin Chai (蔡志仁) MD, PhD.

Department of Pathology, Kaohsiung Medical University Hospital, Kaohsiung, Taiwan, ROC.

Clinical History:

A 42-year-old female was admitted because of right side neck mass for about one week. This non-tender mass measuring 2.3 cm in diameter was hard and unmovable. No other symptom was told. The thyroid sonography showed multiple, hypoechoic nodules and fine needle aspiration cytology revealed positive findings. Physical examinations were generally normal except neck mass stated as above. Thyroid function test was within normal limit. Total thyroidectomy was performed.

Diagnosis: Hashimoto's thyroiditis with diffuse large B cell lymphoma and papillary carcinoma

Gross Findings:

The resected specimen sent for frozen section including right lobe of thyroid gland measured 5.5 x 3.5 x 2.5 cm in size and 16 gram in weight. On cut surface, a relatively well-circumscribed and grayish-white tumor measuring 2 cm in diameter was surrounded by yellowish-gray thyroid tissue. The left lobe of thyroid gland was also obtained later and it was yellowish-gray and firm, grossly.

Histopathological Findings:

The thyroid gland shows lymphoid tissue distributing within and around the lobules and exhibits follicles with prominent germinal centers. Plasma cell and histiocytes are scattered. The thyroid follicles are small and atrophic.

Some of them are lined by Hürthel cells composed of enlarged and hyperchromatic nuclei as well eosinophilic cytoplasm.

The tumor shows diffuse pattern of medium to large lymphoid cells which have vesicular nuclei with visible nucleoli and moderately abundant cytoplasm. Punctate necrosis and brisk mitotic activity are noted focally. The immunohistochemical stain discloses positive reaction with CD20. There are many small reactive lymphocytes demonstrated by CD3 immunohistochemically. The feature is consistent with diffuse large B cell lymphoma. Moreover, it also reveals a small nodule of papillary carcinoma of composed of cuboidal or polygonal cells which have ground-glass nuclei, nuclear grooving and pale cytoplasm mainly in microfollicles or solid pattern.

Discussion:

In 1912 Hashimoto described four women with thyroid goiter as a result of transformation of thyroid tissue to lymphoid tissue. Hashimoto's disease is now recognized as a form of chronic autoimmune thyroiditis having two clinical forms: an atrophic form and the goitrous form. The autoimmune process begins with the activation of CD4 (helper) T lymphocytes specific for thyroid antigens but mechanism of activation is unknown. The current hypothesis is that the thyroid epithelial cells themselves present intracellular proteins to the helper T cells.

Hashimoto's disease occurs most commonly in middle-aged women. Up to 45% of women and 20% of men in the United Kingdom have focal thyroiditis at autopsy. Most patients are asymptomatic at the time of presentation. Only 10% to 20% of patients present with clinical manifestations of hypothyroidism. Physical examination reveals a diffusely enlarged, firm, irregular gland with or without regional lymph node enlargement. The gland is rarely tender to palpation. The firmness and asymmetry of the gland at times raise the suspicion of a neoplasm. Thyroid imaging is nonspecific and rarely helpful for diagnosing Hashimoto's disease.

Hashimoto's disease is characterized histologically by diffuse lymphocytic infiltration, occasional germinal centers, sparse colloid, and fibrosis. Hürthel cells are scattered throughout the small thyroid follicles.

The natural history of Hashimoto's disease is slow progression to the hypothyroid state at a rate of 5% per year. High initial titers of thyroid antibodies at presentation predict high rates of progression to the hypothyroid state.

Treatment of Hashimoto's disease depends on its severity and observation, thyroid hormone and subtotal thyroidectomy are choices of therapy.

Malignant lymphomas are neoplasms of the immune system. Non-Hodgkin's lymphoma of the thyroid is rare, accounting for only 2% to 4% of thyroid malignancies and less than 2% of all extranodal lymphomas. Associated Hashimoto's thyroiditis has been found in more than 85% of thyroid lymphomas but the relation remains obscure.

Thyroid lymphomas tend to present in women during their seventh decade of life, usually with a longstanding history of Hashimoto's disease. Patients usually present with a several-week history of a rapidly enlarging painless goiter. Most of the patients are euthyroid. The thyroid is firm with unilateral or bilateral involvement.

Thyroid lymphomas appear grossly as pale-gray or light-tanned, fleshy tumors. Most thyroid lymphomas are non-Hodgkin's, predominantly large-cell lymphomas. Most thyroid lymphomas are non-Hodgkin's lymphomas of B cell origin and up to 69% of these lymphomas demonstrate tumor origin from mucosa-associated lymphoid tissue (MALT). Thyroid lymphoma is distinguished from inflammatory conditions by confirming the presence of a monoclonal population of lymphocytes.

The combination of locoregional irradiation and chemotherapy consisting of CHOP (cyclophosphamide, doxorubicin, vincristine, and prednisone), with or without the addition of methotrexate or adriamycin, is now utilized in many centers for thyroid lymphoma.

The overall survival of patients with thyroid lymphoma ranges from 50% to 70%. Use of radiotherapy alone in MALT thyroid lymphomas results in 96% complete response, a relapse rate of 30%, and overall cause-specific survival of 90% at 5 and 10 years. Tumor size larger than 10 cm, mediastinal involvement, non-MALT origin, and the presence of dysphagia have been shown to be poor prognostic indicators

Papillary carcinoma is also said to be more common in glands affected by Hashimoto's thyroiditis. Some authors find reported evidence for claim to be more convincing than that for Graves disease but feel that definite statistical relationship remains to be proven. Hyperplastic nodules or adenomas are present 40 percent of the glands harboring papillary carcinoma, but two events are probably unrelated.

Diagnostic Criteria:

The diagnosis of Hashimoto's thyroiditis requires presence of diffuse lymphocytic infiltration, occasional germinal centers, sparse colloid, and fibrosis as well as Hürthel cells changes throughout the small thyroid follicles. The diagnosis of malignant lymphoma requires presence of a monoclonal population of lymphocytes. The diagnosis of papillary carcinoma requires presence of characters including ground-glass nuclei and nuclear grooving.

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Comparative Pathology Case 259

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Clinical History:

A 72-year-old man underwent a nephroureterectomy with bladder cuff resection because of left ureteral transitional cell carcinoma in June 2003 and transurethral resection of multiple papillary tumors of the urinary bladder in March 2004. A scheduled course (six weekly inductions and three weekly maintenance treatments) of intravesical instillation of BCG was performed postoperatively. Unfortunately, he presented with low-grade fever, abdominal pain and distention one week after the complete course. Physical examination showed tenderness and fullness of abdomen. Laboratory findings revealed leukocytosis and elevated serum creatinine level. Cultures of blood and urine for common bacteria were negative. Initial chest radiograph revealed increased infiltration over the left lower lobe of the lung. Abdominal computed tomography showed massive loculated high-density ascites with irregular mesenteric infiltration and thickening of the omentum. Diagnostic laparoscopy was performed

Diagnosis: tuberculous peritonitis

Gross Finding: miliary lesions on bowel, mesentery, and peritoneum.

Histopathologic Findings: caseating granulomatous inflammation

Discussion:

Intravesical BCG has been used widely after transurethral resection in the adjuvant treatment of patients with Ta, T1 papillary transitional cell carcinoma

of the bladder, as well as in the primary treatment of carcinoma in situ (CIS). Complications associated with BCG therapy have been occasionally reported in the literature. But tuberculous peritonitis following BCG instillation was rarely reported. The pathogenic mechanisms of TB peritonitis after BCG therapy are unclear. They involved either an immune disorder or a systemic dissemination of the BCG-attenuated strain. The tubercle bacillus, therefore, may enter the peritoneal cavity from the blood vessels of inflamed urothelium or release important proinflammatory factors such as interleukins, interferon, or tumor necrosis factor to induce a hypersensitivity reaction. In our case, biopsy from peritoneum revealed caseating granulomatous inflammation. Cultures of mycobacterium tuberculosis complex (MTBC) and direct detection of MTBC DNA from the peritoneal fluid were positive. Our patient appeared to have a direct infection of the BCG strain, but the precise route of dissemination remained unclear. The site and depth of the previous bladder tumor resection might be a possible pathway for direct spread of the tubercle bacillus.

Though prescriptive medications are variable, the efficacy of triple or quadruple therapy of TB peritonitis for 6-12 months is well established. The British Thoracic Society recommends two months intensive phase with rifampicin, isoniazid, pyrazinamide and ethambutol followed by four months maintenance phase with rifampicin and isoniazid in uncomplicated abdominal tuberculosis.

Clinically, TB peritonitis is manifested by fever, abdominal pain, fullness and ascites, while ascites is the most common sign. All these features are usually non-specific and might be misdiagnosed as metastasis of malignancy. The abdominal CT images may play an early role in diagnosis, particularly because some features can strongly suggest tuberculous peritonitis, such as high-density loculated ascites, irregular soft tissue density in the omental area, or high and low irregular density infiltration in the mesentery. Under laparoscopy, miliary nodules on the omentum, intestine, and peritoneum and the presence of adhesions and ascites are usually suggestive of tuberculosis. Excisional biopsy confirms the diagnosis of tuberculous peritonitis.

Diagnostic criteria:

Biopsy from peritoneum revealed caseating granulomatous inflammation.

Cultures of mycobacterium tuberculosis complex (MTBC) and direct detection of MTBC DNA from the peritoneal fluid were positive.

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中華民國比較病理學會
第一次至第三十六次比較病理學研討會病例分類一覽表

分 類	病 例 編 號	診 斷	動 物 別	提 供 單 位
腫 瘤	1.	Myxoma	Dog	美國紐約動物醫學中心
	2.	Chordoma	Ferret	美國紐約動物醫學中心
	3.	Ependyoblastoma	Human	長庚紀念醫院
	8.	Synovial sarcoma	Pigeon	美國紐約動物醫學中心
	18.	Malignant lymphoma	Human	長庚紀念醫院
	19.	Malignant lymphoma	Wistar rat	國家實驗動物繁殖及研究中心
	24.	Metastatic thyroid carcinoma	Human	省立新竹醫院
	25.	Chordoma	Human	新光吳火獅紀念醫院
	34.	Interstitial cell tumor	Dog	中興大學獸醫學系
	35.	Carcinoid tumor	Human	長庚紀念醫院
	36.	Hepatic carcinoid	Siamese cat	美國紐約動物醫學中心
	38.	Pheochromocytoma	Ferret	美國紐約動物醫學中心
	39.	Extra adrenal pheochromocytoma	Human	新光吳火獅紀念醫院
	40.	Mammary gland fibroadenoma	Rat	國家實驗動物繁殖及研究中心
	41.	Fibroadenoma	Human	省立豐原醫院
	42.	Canine benign mixed type mammary gland tumor	Pointer bitch	中興大學獸醫學系
	43.	Phyllodes tumor	Human	台中榮民總醫院
	44.	Canine oral papilloma	Dog	台灣大學獸醫學系
	45.	Squamous cell papilloma	Human	中國醫藥學院
	47.	Lung: metastatic carcinoma associated with cryptococcal infection. Liver: metastatic carcinoma. Adrenal gland, right: carcinoma (primary)	Human	三軍總醫院
	56.	Gastrointestinal stromal tumor	Human	台中榮民總醫院
	59.	Colonic adenocarcinoma	Dog	美國紐約動物醫學中心

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62.	Submucosal leiomyoma of stomach	Human	頭份為恭紀念醫院
64.	1.Adenocarcinoma of sigmoid colon 2.Old schistosomiasis of rectum	Human	省立新竹醫院
71.	Myelolipoma	Human	台北耕莘醫院
72.	Reticulum cell sarcoma	Mouse	國家實驗動物繁殖及研究中心
73.	Hepatocellular carcinoma	Human	新光吳火獅紀念醫院
74.	Hepatocellular carcinoma induced by aflatoxin B1	Wistar strain rats	台灣省農業藥物毒物試驗所
81.	Angiomyolipoma	Human	羅東博愛醫院
82.	Inverted papilloma of prostatic urethra	Human	省立新竹醫院
84.	Nephrogenic adenoma	Human	國泰醫院
86.	Multiple myeloma with systemic amyloidosis	Human	佛教慈濟綜合醫院
87.	Squamous cell carcinoma of renal pelvis and calyces with extension to the ureter	Human	台北病理中心
88.	Fibroepithelial polyp of the ureter	Human	台北耕莘醫院
90.	Clear cell sarcoma of kidney	Human	台北醫學院
93.	Mammary gland adenocarcinoma, complex type , with chondromucinous differentiation	Dog	台灣大學獸醫學系
94.	1.Breast, left, modified radical mastectomy, showing papillary carcinoma, invasive 2.Nipple, left, modified radical mastectomy, papillary carcinoma, invasive 3.Lymph node, axillary, left, lymphadenectomy, papillary carcinoma, metastatic	Human	羅東聖母醫院
95.	Transmissible venereal tumor	Dog	中興大學獸醫學系
96.	Malignant lymphoma, large cell type, diffuse, B-cell phenotype	Human	彰化基督教醫院
97.	Carcinosarcomas	Tiger	台灣養豬科學研究所
98.	Mucinous carcinoma with intraductal carcinoma	Human	省立豐原醫院
99.	Mammary gland adenocarcinoma, type B, with pulmonary metastasis, BALB/cBYJ mouse	Mouse	國家實驗動物繁殖及研究中心
100.	Malignant fibrous histiocytoma and paraffinoma	Human	中國醫藥學院
102.	Pleomorphic adenoma (benign	Human	佛教慈濟綜合醫院

	mixed tumor)		
103.	Atypical central neurocytoma	Human	新光吳火獅紀念醫院
104.	Cardiac schwannoma	SD rat	國家實驗動物繁殖及研究中心
109.	Desmoplastic infantile ganglioglioma	Human	高雄醫學院
107.	1.Primary cerebral malignant lymphoma 2.Acquired immune deficiency syndrome	Human	台北市立仁愛醫院
111.	Schwannoma	Human	三軍總醫院
114.	Osteosarcoma	Dog	美國紐約動物醫學中心
115.	Mixed germ-cell stromal tumor, mixed sertoli cell and seminoma-like cell tumor	Dog	美國紐約動物醫學中心
116.	Krukenberg's Tumor	Human	台北病理中心
117.	Primary insular carcinoid tumor arising from cystic teratoma of ovary.	Human	花蓮慈濟綜合醫院
119.	Polypoid adenomyoma	Human	大甲李綜合醫院
120.	Gonadal stromal tumor	Human	耕莘醫院
122.	Gestational choriocarcinoma	Human	彰化基督教醫院
123.	Ovarian granulosa cell tumor	Horse	中興大學獸醫學系
129.	Kaposi's sarcoma	Human	華濟醫院
131.	Basal cell carcinoma (BCC)	Human	羅東聖母醫院
132.	Transmissible venereal tumor	Dog	臺灣大學獸醫學系
137	Canine Glioblastoma Multiforme in Cerebellopontine Angle	Dog	中興大學獸醫病理研究所
143	Osteosarcoma associated with metallic implants	Dog	紐約動物醫學中心
144	Radiation-induced osteogenic sarcoma	Human	花蓮慈濟綜合醫院
145	Osteosarcoma, osteogenic	Dog	臺灣大學獸醫學系
146	Pleomorphic rhabdomyosarcoma	Human	行政院衛生署新竹醫院
147	Papillary Mesothelioma of pericardium	Leopard	屏東科大學獸醫學系
148	Cystic ameloblastoma	Human	台北醫學院
149	Giant cell tumor of bone	Canine	中興大學獸醫學院
150	Desmoplastic small round cell tumor (DSRCT)	Human	華濟醫院
152	Hepatocellular carcinoma	Human	羅東聖母醫院
158	Hemangiopericytoma	Human	羅東聖母醫院
160	Cardiac fibroma	Human	高雄醫學大學病理學

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166	Nephroblastoma	Rabbit	紐約動物醫學中心
168	Nephroblastoma	Pig	台灣動物科技研究所
169	Nephroblastoma with rhabdomyoblastic differentiation	Human	高雄醫學大學病理科
172	Spindle cell sarcoma	Human	羅東聖母醫院
174	Juxtaglomerular cell tumor	Human	新光醫院病理檢驗科
190	Angiosarcoma	Human	高雄醫學大學病理學科
192	Cardiac myxoma	Human	彰化基督教醫院病理科
194	Kasabach-Merrit syndrome	Human	慈濟醫院病理科
195	Metastatic hepatocellular carcinoma, right atrium	Human	新光醫院病理科
197	Papillary fibroelastoma of aortic valve	Human	新光醫院病理科
198	Extraplacental chorioangioma	Human	耕莘醫院病理科
208	Granulocytic sarcoma (Chloroma) of uterine cervix	Human	高雄醫學大學病理學科
210	Primary non-Hodgkin's lymphoma of bone, diffuse large B cell, right humerus	Lymphoma	彰化基督教醫院病理科
213	Lymphoma, multi-centric type	Dog	中興大學獸醫系
214	CD30 (Ki-1)-positive anaplastic large cell lymphoma (ALCL)	Human	新光醫院病理科
215	Lymphoma, mixed type	Koala	台灣大學獸醫學系
217	Mucosal associated lymphoid tissue (MALT) lymphoma, small intestine	Cat	臺灣大學獸醫學研究所
218	Nasal type NK/T cell lymphoma	Human	高雄醫學大學病理科
222	Acquired immunodeficiency syndrome (AIDS) with disseminated Kaposi's sarcoma	Human	慈濟醫院病理科
224	Epithelioid sarcoma	Human	彰化基督教醫院病理科
226	Cutaneous B cell lymphoma , eyelid , bilateral	Human	羅東聖母醫院病理科
227	Extramammary Paget's disease (EMPD) of the scrotum	Human	萬芳北醫皮膚科, 病理科
228	Skin, back, excision, CD30+diffuse large B cell lymphoma, Soft tissue, leg , side not stated, excision, vascular leiomyoma	Human	高雄醫學大學附設醫院病理科

	231	Malignant melanoma, metastasis to intra-abdominal cavity	Human	財團法人天主教耕莘醫院病理科
	232	Vaccine-associated rhabdomyosarcoma	Cat	台灣大學獸醫學系
	233	1. Pleura: fibrous plaque, 2. Lung: adenocarcinoma, 3. Brain: metastatic adenocarcinoma	Human	高雄醫學大學附設中和醫院病理科
	235	1. Neurofibromatosis, type I 2. Malignant peripheral nerve sheath tumor (MPNST)	Human	花蓮慈濟醫院病理科
	239	Glioblastoma multiforme	Human	羅東聖母醫院
	240	Pineoblastoma	Wistar rat	綠色四季
	241	Chordoid meningioma	Human	高醫病理科
	243	Infiltrating lobular carcinoma of left breast with meningeal carcinomatosis and brain metastasis	Human	花蓮慈濟醫院病理科
	245	Microcystic Meningioma.	Human	耕莘醫院病理科
	247	Well-differentiated fetal adenocarcinoma without lymph node metastasis	Human	新光吳火獅紀念醫院
	249	Adenocarcinoma of lung.	Human	羅東聖母醫院
	252	Renal cell carcinoma	Canine	國立台灣大學獸醫學系獸醫學研究所
細菌	253	Clear cell variant of squamous cell carcinoma, lung	Human	高雄醫學大學附設中和醫院病理科
	6.	Tuberculosis	Monkey	臺灣大學獸醫學系
	7.	Tuberculosis	Human	省立新竹醫院
	12.	H. pylori-induced gastritis	Human	台北病理中心
	13.	Pseudomembranous colitis	Human	省立新竹醫院
	26.	Swine salmonellosis	Pig	中興大學獸醫學系
	27.	Vegetative valvular endocarditis	Pig	台灣養豬科學研究所
	28.	Nocardiosis	Human	台灣省立新竹醫院
	29.	Nocardiosis	Largemouth bass	屏東縣家畜疾病防治所
	32.	Actinomycosis	Human	台灣省立豐原醫院
	33.	Tuberculosis	Human	苗栗頭份為恭紀念醫院
	53.	Intracavitary aspergilloma and cavitary tuberculosis, lung.	Human	羅東聖母醫院
	54.	Fibrocalcified pulmonary TB, left Apex. Mixed actinomycosis and aspergillosis lung infection with abscess DM, NIDDM.	Human	林口長庚紀念醫院
	58.	Tuberculous enteritis with	Human	佛教慈濟綜合醫院

	perforation		
61.	Spirochetosis	Goose	國立嘉義農專獸醫科
63.	Proliferative enteritis (<i>Lawsonia intracellularis</i> infection)	Porcine	屏東縣家畜疾病防治所
68.	Liver abscess (Klebsillae pneumoniae)	Human	台北醫學院
77.	1. Xanthogranulomatous inflammation with nephrolithiasis, kidney, right. 2. Ureteral stone, right.	Human	羅東聖母醫院
79.	Emphysematous pyelonephritis	Human	彰化基督教醫院
89.	1. Severe visceral gout due to kidney damaged 2. Infectious serositis	Goose	中興大學獸醫學系
108.	Listeric encephalitis	Lamb	屏東縣家畜疾病防治所
113.	Tuberculous meningitis	Human	羅東聖母醫院
134.	Swine salmonellosis with meningitis	Swine	中興大學獸醫學系
135.	Meningoencephalitis, fibrinopurulent and lymphocytic, diffuse, subacute, moderate, cerebrum, cerebellum and brain stem, caused by <i>Streptococcus</i> spp. infection	Swine	國家實驗動物繁殖及研究中心
140	Coliform septicemia of newborn calf	Calf	屏東縣家畜疾病防治所
161	Porcine polyserositis and arthritis (Glasser's disease)	Pig	中興大學獸醫學院
162	Mycotic aneurysm of jejunal artery secondary to infective endocarditis	Human	慈濟醫院病理科
170	Chronic nephritis caused by <i>Leptospira</i> spp	Pig	中興大學獸醫學院
173	Ureteropyelitis and cystitis	Pig	中國化學製藥公司
254	Pulmonary actinomycosis.	Human	耕莘醫院病理科
病毒	21. Newcastle disease	Chickens	台灣大學獸醫學系
	22. Herpesvirus infection	Goldfish	台灣大學獸醫學系
	30. Demyelinating canine distemper encephalitis	Dog	台灣養豬科學研究所
	31. Adenovirus infection	Malayan sun bears	台灣大學獸醫學系
	50. Porcine cytomegalovirus infection	Piglet	台灣省家畜衛生試驗

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55.	Infectious laryngo-tracheitis (Herpesvirus infection)	Broilers	國立屏東技術學院獸醫學系
69.	Pseudorabies (Herpesvirus infection)	Pig	台灣養豬科學研究所
78.	Marek's disease in native chicken	Chicken	屏東縣家畜疾病防治所
92.	Foot- and- mouth disease (FMD)	Pig	屏東縣家畜疾病防治所
101.	Swine pox	Pig	屏東科技大學獸醫學系
110.	Pseudorabies	Piglet	國立屏東科技大學
112.	Avian encephalomyelitis	Chicken	國立中興大學
128.	Contagious pustular dermatitis	Goat	屏東縣&台東縣家畜疾病防治所
130.	Fowl pox and Marek's disease	Chicken	中興大學獸醫學系
133.	Japanese encephalitis	Human	花蓮佛教慈濟綜合醫院
136	Viral encephalitis, poliovirus infection	Lory	美國紐約動物醫學中心
138	1.Aspergillus spp. encephalitis and myocarditis 2.Demyelinating canine distemper encephalitis	Dog	台灣大學獸醫學系
153	Enterovirus 71 infection	Human	彰化基督教醫院
154	Ebola virus infection	African Green monkey	行政院國家科學委員會實驗動物中心
155	Rabies	Longhorn Steer	台灣大學獸醫學系
163	Parvoviral myocarditis	Goose	屏東科技大學獸醫學系
199	SARS	Human	台大醫院病理科
200	TGE virus	swine	臺灣動物科技研究所
201	Feline infectious peritonitis(FIP)	Feline	台灣大學獸醫學系
209	Chicken Infectious Anemia (CIA)	Layer	屏東防治所
219	1.Lymph node:Lymphdenitis, with lymphocytic depletion and intrahistiocytic basophilic cytoplasmic inclusion bodies. Etiology consistent with Porcine Circovirus(PCV)infection. 2.Lung: Bronchointerstitial pneumonia,moderate, lymphoplasmacytic, subacute.	Pig	臺灣動物科技研究所
220	Cytomegalovirus colitis	Human	彰化基督教醫院病理

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221	Canine distemper virus Canine adenovirus type II co-infection	Canine	國家實驗動物繁殖及 研究中心	
223	1. Skin, mucocutaneous junction (lip): Cheilitis, subacute, diffuse, sever, with epidermal pustules, ballooning degeneration, proliferation, and eosinophilic intracytoplasmic inclusion bodies, Saanen goat. 2. Haired skin: Dermatitis, proliferative, lymphoplasmacytic, subacute, diffuse, sever, with marked epidermal pustules, ballooning degeneration, acanthosis, hyperkeratosis, and eosinophilic intracytoplasmic inclusion bodies.	Goat	台灣動物科技研究所	
238	Hydranencephaly	Cattle	國立屏東科技大學獸 醫學系	
248	Porcine Cytomegalovirus (PCMV) infection	Swine	國立屏東科技大學獸 醫學系	
250	Porcine respiratory disease complex (PRDC) and polyserositis, caused by co-infection with pseudorabies (PR) virus, porcine circovirus type 2 (PCV 2), porcine reproductive and respiratory syndrome (PRRS) virus and <i>Salmonella typhimurium</i> .		屏東縣家畜疾病防所	
黴菌	23.	Chromomycosis	Human	台北病理中心
	47.	Lung: metastatic carcinoma associated with cryptococcal infection. Liver: metastatic carcinoma. Adrenal gland, right: carcinoma (primary)	Human	三軍總醫院
	48.	Adiaspiromycosis	Wild rodents	台灣大學獸醫學系
	52.	Aspergillosis	Goslings	屏東縣家畜疾病防治 所
	53.	Intracavitary aspergilloma and cavitary tuberculosis, lung.	Human	羅東聖母醫院
	54.	Fibrocalcified pulmonary TB, left Apex. Mixed actinomycosis and aspergillosis lung infection with abscess DM, NIDDM.	Human	林口長庚紀念醫院
	105.	Mucormycosis	Human	花蓮佛教慈濟綜合醫

		Diabetes mellitus		院
	127.	Eumycotic mycetoma	Human	花蓮佛教慈濟綜合醫院
	138	1.Aspergillus spp. encephalitis and myocarditis 2.Demyelinating canine distemper encephalitis	Dog	台灣大學獸醫學系
寄生蟲	14.	Dirofilariasis	Dog	台灣省家畜衛生試驗所
	15.	Pulmonary dirofilariasis	Human	台北榮民總醫院
	20.	Sparganosis	Human	台北榮民總醫院
	46.	Feline dirofilariasis	Cat	美國紐約動物醫學中心
	49.	Echinococcosis	Human	台北榮民總醫院
	60.	Intestinal capillariasis	Human	台北馬偕醫院
	64.	1.Adenocarcinoma of sigmoid colon 2.Old schistosomiasis of rectum	Human	省立新竹醫院
	66.	Echinococcosis	Chapman's zebra	台灣大學獸醫學系
	67.	Hepatic ascariasis and cholelithiasis	Human	彰化基督教醫院
	106.	Parasitic meningoencephalitis, caused by Toxocara canis larvae migration	Dog	臺灣養豬科學研究所
	139	Disseminated strongyloidiasis	Human	花蓮佛教慈濟綜合醫院
	141	Eosinophilic meningitis caused by Angiostrongylus cantonensis	Human	台北榮民總醫院病理檢驗部
	156	Parastrongylus cantonensis infection	Formosan gem-faced civet	中興大學獸醫學院
	157	Capillaria hepatica, Angiostrongylus cantonensis	Norway Rat	行政院農業委員會農業藥物毒物試驗所
	202	Colnorchiasis	Human	高雄醫學院附設醫院
	203	Trichuriasis	Human	彰化基督教醫院
	204	Psoroptes cuniculi infection (Ear mite)	Rabbit	農業藥物毒物試驗所
	205	Pulmonary dirofilariasis	Human	和信治癌中心醫院
	206	Capillaries philippinesis	Human	和信治癌中心醫院
	207	Adenocarcinoma with schistosomiasis	Human	花蓮佛教慈濟綜合醫院
原蟲	4.	Cryptosporidiosis	Goat	台灣養豬科學研究所
	15.	Amoebiasis	Lemur fulvus	台灣養豬科學研究所
	16.	Toxoplasmosis	Squirrel	台灣養豬科學研究所
	17.	Toxoplasmosis	Pig	屏東技術學院獸醫學系

立 克 次 體	51.	Pneumocystis carinii pneumonia	Human	台北病理中心
	57.	Cecal coccidiosis	Chicken	中興大學獸醫學系
	65.	Cryptosporidiosis	Carprine	台灣養豬科學研究所
	211	Avian malaria, African black-footed penguin	Avian	臺灣動物科技研究所
	242	Neosporosis	Cow	國立屏東科技大學獸醫學系
	70.	Acute Q fever hepatitis	Human	佛教慈濟綜合醫院
皮膚	229	Necrotizing inflammation due to scrub typhus	Human	佛教慈濟醫院病理科
	251	Scrub typhus with diffuse alveolar damage in bilateral lungs.	Human	佛教慈濟醫院病理科
其它	216	Cytophagic histiocytic panniculitis with terminal hemophagocytic syndrome	Human	佛教慈濟綜合醫院病理科
其它	9.	Perinephric pseudocyst	Cat	台灣大學獸醫學系
	10.	Choledochocyst	Human	長庚紀念醫院
	11.	Bile duct ligation	Rat	中興大學獸醫學系
	37.	Myositis ossificans	Human	台北醫學院
	75.	Acute yellow phosphorus intoxication	Rabbits	中興大學獸醫學系
	76.	Polycystic kidney bilateral and renal failure	Cat	美國紐約動物醫學中心
	151	Osteodystrophia fibrosa	Goat	台灣養豬科學研究所 & 台東縣家畜疾病防治所
	80.	1.Glomerular sclerosis and hyalinosis, segmental, focal, chronic, moderate 2.Benign hypertension	SHR rat	國防醫學院 & 國家實驗動物繁殖及研究中心
	83.	Phagolysosome-overload nephropathy	SD rats	實驗動物繁殖中心
	85.	Renal amyloidosis	Dog	台灣養豬科學研究所
	89.	1.Severe visceral gout due to kidney damaged 2.Infectious serositis	Goose	中興大學獸醫學系
	91.	Hypervitaminosis D	Orange-rumped agoutis	台灣大學獸醫學系
	118.	Cystic endometrical hyperplasia	Dog	臺灣養豬科學研究所
	121.	Cystic subsurface epithelial structure (SES)	Dog	國科會實驗動物中心
	124.	Superficial necrolytic dermatitis	Dog	美國紐約動物醫學中心
	125.	Solitary congenital self-healing histiocytosis	Human	羅東博愛醫院

126.	Alopecia areata	Mouse	實驗動物繁殖及研究中心
142	Avian encephalomalacia (Vitamin E deficiency)	Chicken	國立屏東科技大學獸醫學系
159	Hypertrophic cardiomyopathy	Pig	台灣大學獸醫學系
165	Chinese herb nephropathy	Human	三軍總醫院病理部及腎臟科
167	Acute pancreatitis with rhabdomyolysis	Human	慈濟醫院病理科
171	Malakoplakia	Human	彰化基督教醫院
183	Darier's disease	Human	高雄醫學大學病理科
191	1. Polyarteritis nodosa 2. Hypertrophic Cardiomyopathy	Feline	台灣大學獸醫學系
193	Norepinephrin cardiotoxicity	Cat	台中榮總
196	Cardiomyopathy (Experimental)	Mice	綠色四季
212	Kikuchi disease (histiocytic necrotizing lymphadenitis)	Lymphadenitis	耕莘醫院病理科
225	Calcinosis circumscripta, soft tissue of the right thigh, dog	Dog	台灣大學獸醫所
230	Hemochromatosis, liver, bird	Bird	台灣大學獸醫學系
234	Congenital hyperplastic goiter	Holstein calves	屏東縣家畜疾病防治所
236	Hepatic lipidosi (fatty liver)	Rats	中興大學獸醫學病理學研究所
237	Arteriovenous malformation (AVM) of cerebrum	Human	耕莘醫院病理科
244	Organophosphate induced delayed neurotoxicity in hens	Hens	中興大學獸醫學病理學研究所

會員資料更新服務

各位會員：

您好！如果您的會員資料有更新或誤刊情形，麻煩您填妥表格後
寄回學會秘書處或電話連絡：

中華民國比較病理學會秘書處

350 苗栗縣竹南鎮頂埔里科東二路 52 號

台灣動物科技研究所動物醫學組 病理室收

Tel: (037) 585872

Fax: (037) 585850

e-mail address: hic01@mail.atit.org.tw

-----中華民國比較病理學會-----

會員資料更改卡

姓 名：_____ 會員類別： 一般會員

學生會員

贊助會員

最高學歷：_____

服務單位：_____ 職 稱：_____

永久地址：_____

通訊地址：_____

電 話：_____ 傳 真：_____

E-Mail Address：_____

中華民國比較病理學會

誠摯邀請您加入

入 會 辦 法

一、本會會員申請資格為：

- (一) 一般會員：贊同本會宗旨，年滿二十歲，具有國內外大專院校（或同等學歷）生命科學及其它相關科系畢業資格或高職畢業從事生命科學相關工作滿兩年者。
- (二) 學生會員：贊同本會宗旨，在國內、外大專院校生命科學或其他相關科系肄業者（請檢附學生身份證明）。
- (三) 贊助會員：贊助本會工作之團體或個人。
- (四) 榮譽會員：凡對比較病理學術或會務之推廣有特殊貢獻，經理事會提名並經會員大會通過者。

二、會員：

- (一) 入 會 費：一般會員新台幣一仟元，學生會員一百元，贊助會員伍仟元，於入會時繳納。
- (二) 常年會費：一般會員新台幣伍佰元，學生會員一百元。

【註：學生會員身份變更為一般會員時，只需繳交一般會員之常年會費】

三、請填妥入會申請表郵寄或傳真方式寄回中華民國比較病理學會秘書處收。地址：350 苗栗縣竹南鎮頂埔里科東二路 52 號 台灣動物科技研究所動物醫學組 電話：037-585872、傳真 037-585850。

