

*This section of the journal serves to highlight the works and researches done by local doctors or doctors either in Brunei Darussalam or in collaborations with other centers that have been published in regional or international journals. This also includes works published as part of collaboration with centers outside of Brunei Darussalam. These works include review articles, original articles and case reports published between 1<sup>st</sup> January to 31<sup>st</sup> May 2010.*

### **Radiological manifestations of melioidosis**

Lim KS, Chong VH. Clin Radiol. 2010 Jan;65(1):66-72.

Melioidosis is a serious infection that is associated with high mortality. It is due to a Gram-negative bacterium, *Burkholderia pseudomallei* which is an environmental saprophyte found in wet soils. Melioidosis is endemic to northern Australia and the Southeast Asia. However, there is now increasing number of reports of imported cases to regions where this infection has not been previously encountered. Almost any organ can be affected. Like many other conditions, radiological imaging is an integral part of the diagnostic workup of melioidosis. Awareness of the various radiological manifestations can help direct appropriate investigations to achieve early diagnosis and the initiation of appropriate treatment. Generally, there are no known characteristic features on imaging that can specifically differentiate melioidosis from other infections. However, the "honeycomb" appearance has been described to be characteristic for large melioidosis liver abscesses. Simultaneous involvement of various organs is also characteristics. To date, there are few data available on the radiological manifestations of melioidosis. The present pictorial essay describes melioidosis affecting the various organs.

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### **Possible significance of differences in proportions of cytotoxic T cells and B-lineage cells in the tumour-infiltrating lymphocytes of typical and atypical medullary carcinomas of the breast.**

Lim KH, Telisinghe, Abdullah MS, Ramasamy R. Cancer Immun. 2010 Jan 22;10:3.

Medullary carcinoma (MC) of the breast is a high grade carcinoma that has a relatively favourable prognosis compared to atypical medullary carcinoma (AMC) and other more common breast carcinomas. In a retrospective study in Brunei Darussalam of all available biopsy samples, we compared the nature of the tumour-infiltrating lymphocytes (TILs) in MC and AMC in relation to recorded tumour characteristics. CD4, CD8, CD20, CD25, CD45RO, and CD56 and common tumour biomarkers were detected immunohistochemically. The 11 cases of MC had no nodal metastases and survived without relapse, suggesting good tumour control. In contrast, 7 cases of nodal metastases and 1 relapse were observed in 12 AMCs. Although not statistically significant, there was a tendency for a greater proportion of AMCs to express the Her2/neu oncogene. Higher proportions of CD45RO+ and CD8+ cells, and lower levels of CD20+ cells, were characteristic of TILs in MC compared to AMC. The ratio of CTL to B-lineage cells in TILs in both tumours considered together was inversely related to the expression of HER2/neu and the presence of nodal metastases. The findings suggest that CTLs, rather than antibodies, may give better tumour control in MC relative to AMC. We propose that a comparison of the cellular, molecular and immunological characteristics of MC and AMC, as a paired model system, in a multi-centre investigation with a much larger number of samples will be valuable for better understanding mechanisms of tumour immunity.

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Article is available free from <http://www.cancerimmunity.org/v10p3/091214.htm> (Journal Website).

**Development of the RIPASA score: a new appendicitis scoring system for the diagnosis of acute appendicitis.**

Chong CF, Adi MI, Thien A, Suyoi A, Mackie AJ, Tin AS, Tripathi S, Jaman NH, Tan KK, Kok KY, Mathew VV, Paw O, Chua HB, Yapp SK. Singapore Med J. 2010 Mar;51(3):220-5.

**INTRODUCTION:** Acute appendicitis is one of the most common surgical emergencies. The Alvarado and modified Alvarado scores have been developed to aid diagnosis, but both scoring systems have poor sensitivity and specificity when applied in Middle Eastern and Asian populations. The aim of this study was to develop a new scoring system that is suitable for the local population. **METHODS:** Clinical data from 312 patients who had undergone an emergency appendicectomy was retrospectively collected and used to generate 15 parameters. The probability was calculated and a score of 0.5, 1.0 or 2.0 was allocated to each parameter. The receiver operating curve (ROC), sensitivity, specificity, positive predictive value (PPV) and negative predictive value (NPV) of the new scoring system were derived using the StatsDirect statistical software. **RESULTS:** The 15 parameters and the scores generated were age (less than 40 years is 1 point; greater than 40 years is 0.5 point), gender (male is 1 point; female is 0.5 point), right iliac fossa (RIF) pain (0.5 point), migration of pain to RIF (0.5 point), nausea and vomiting (1 point), anorexia (1 point), duration of symptoms (less than 48 hours is 1 point; more than 48 hours is 0.5 point), RIF tenderness (1 point), guarding (2 points), rebound tenderness (1 point), Rovsing's sign (2 points), fever (1 point), raised white cell count (1 point), negative urinalysis (1 point) and foreign national registration identity card (1 point). The optimal cut-off threshold score from the ROC was 7.5, with a sensitivity of 88 percent, a specificity of 67 percent, a PPV of 93 percent and an NPV of 53 percent. The negative appendicectomy rate decreased significantly from 16.3 percent to 6.9 percent, which was a 9.4 percent reduction ( $p$  is 0.0007). **CONCLUSION:** The new appendicitis scoring system looked promising when applied to our settings, and had a better sensitivity and specificity than the Alvarado score when applied to Asian populations. A significant reduction in the negative appendicectomy rate was also predicted. A prospective evaluation of this new appendicitis scoring system, referred to as the RIPASA score, is ongoing.

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**Biliary complications secondary to post-cholecystectomy clip migration: a review of 69 cases.**

Chong VH, Chong CF. J Gastrointest Surg. 2010 Apr;14(4):688-96.

**INTRODUCTION:** Post-cholecystectomy clip migration (PCCM) is rare and can lead to complications which include clip-related biliary stones. Most have been reported as case reports. This study reviews cases of clip migration reported in the literatures. **METHOD:** Searches and reviews of the literatures from "PubMed," "EMBASE," and "Google Scholar" search engines using the keywords "clip migration" and "bile duct stones" were carried out. Eighty cases from 69 publications were identified but details for only 69 cases were available for the study. **RESULTS:** The median age at presentations of PCCM was 60 years old (range, 31 to 88 years; female, 61.8%) and the median time from the initial cholecystectomy to clinical presentations was 26 months (range, 11 days to 20 years). Of primary surgeries, 23.2% was for complicated gallstones disease. The median number of clips placed during surgery was six (range, two to more than ten clips). Common diagnoses at presentations of PCCM were obstructive jaundice (37.7%), cholangitis (27.5%), biliary colic (18.8%), and acute pancreatitis (8.7%). The median number of migrated clip was one (range, one to six). Biliary dilatation and strictures were encountered in 74.1% and 28.6%, respectively. Of the 69 cases of PCCM-associated complications, 53 (77%) were successfully treated with endoscopic retrograde cholangiopancreatography (ERCP), 14 (20.2%) with surgery, and one (1.4%) with successful percutaneous transhepatic cholangiography treatment. One patient had spontaneous clearance of PCCM. There was no reported mortality related to PCCM. **CONCLUSION:** PCCM can occur at any time but typically occur at a median of 2 years after cholecystectomy. Clinical presentations are similar to those with primary or secondary choledocholithiasis. Most can be managed successfully with ERCP.

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**Endoscopic management of biliary disorders during pregnancy**

Chong VH, Jalihal A. Hepatobiliary Pancreat Dis Int. 2010 Apr;9(2):180-5.

**BACKGROUND:** Biliary interventions during pregnancy are associated with risks to both the pregnancy and developing fetus. In this report we summarize our experience with endoscopic interventions including endoscopic ultrasound (EUS) in the management of biliary disorders during pregnancy. **METHODS:** Endoscopic retrograde cholangiopancreatographies (ERCPs) performed between May 2003 through January 2010 (n=607) were identified from our database, and cases of interventions during pregnancy were reviewed. All procedures were done using conscious sedation and lead shielding. **RESULTS:** Nine ERCPs (1.5%) were performed in 8 pregnant patients. Their median gestational period was 22 weeks (range, <2-36 weeks). Two, 5 and 2 patients were in their first, second and third trimester, respectively. Indications for ERCP included obstructive jaundice (6 patients) cholangitis (2), and acute pancreatitis/obstructive jaundice (1). Two patients underwent EUS before ERCP. Fluoroscopy was used in 5 ERCPs (median 12 seconds; range 2-20 seconds), and the overall time for a ERCP ranged from 5 to 25 minutes. During ERCP endoscopic sphincterotomy was performed in 5 patients, stenting in 6, and balloon clearance in 3. One procedure caused complication in induction of labor. During pregnancy, there were 4 non-procedure related complications including acute cholecystitis (1), HELLP syndrome resulting in spontaneous abortion (1) and stent migrations (2). Five pregnancies had uncomplicated term deliveries, whereas 2 required urgent caesarian sections (one for fetal distress and 1 for cholangitis secondary to stent migration). One patient was well in her second trimester during follow-up. Seven babies were well at birth with median APGAR scores of 9, and 10 at 5 and 10 minutes, respectively. One baby died of sudden death syndrome at age of 40 days. **CONCLUSIONS:** ERCP is a safe procedure for pregnant women. It can be conducted for biliary stenting and subsequent clearance after deliveries. EUS has a complementary role. Different strategies can be applied according to the conditions or expertise of endoscopists.

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**Acute pancreatitis complicated by jejunal hematoma in a patient on anti-coagulation and anti-platelets**

Chong VH, Basir N, Yaakub AB. JOP. 2010 May 5;11(3):262-5.

**CONTEXT:** Pancreatitis can be associated with significant complications. Bowel hematoma is a rare complication and the second part of the duodenum is the most commonly affected site. Hematomas affecting other parts of the bowel are extremely rare. **CASE REPORT:** A 53-year-old female with a history of atrial fibrillation and ischemic heart disease on anticoagulants and aspirin presented with abdominal pain of a few days duration which had worsened prior to presentation. This was associated with abdominal distension, vomiting and melena. Laboratory investigations showed elevated serum amylase, coagulopathy and severe anemia. Computed tomography imaging showed a jejunal hematoma and pancreatitis with peripancreatic inflammation. She responded to conservative treatment in addition to correction of the coagulopathy and a blood transfusion. Her symptoms were resolved within a few days and a repeat computed tomography scan two months later showed complete resolution of the hematoma and the pancreatitis. **CONCLUSION:** Our case demonstrates a rare complication of acute pancreatitis in a patient with risk factors.

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