

Table of Contents

| | |
|--|-----------|
| Interpreting the Numbers – Pancreatic and Liver Enzymes | 1 |
| Pancreatitis | 1 |
| Lipaemic Serum..... | 1 |
| Amylase & Lipase | 1 |
| TLI..... | 2 |
| PLI..... | 2 |
| Liver Enzymes | 3 |
| Serum Bilirubin | 3 |
| Haematology..... | 3 |
| Hypoproteinaemia..... | 4 |
| Abdominal Imaging | 4 |
| Biopsy..... | 4 |
| Treatment..... | 4 |
| Guidelines for management of pancreatitis..... | 4 |
| Enteral nutrition | 6 |
| Antibiotics? | 6 |
| Anticholinergics? | 6 |
| Corticosteroids?..... | 6 |
| Pain relief | 6 |
| Clinical pathology of hepatobiliary disease | 7 |
| Alanine Aminotransferase (ALT, formerly SGPT) | 7 |
| AST..... | 8 |
| Alkaline Phosphatase (ALP)..... | 8 |
| Isoenzymes | 8 |
| Cats differ from dogs(as usual!!!) | 9 |
| Gamma Glutamyl Transpeptidase (GGT)..... | 9 |
| Bile Acids | 9 |
| What are bile acids? | 9 |
| What causes bile acids to appear in blood?..... | 10 |
| When to request bile acids?..... | 10 |
| Interpreting The Numbers – Urea, Creatinine and SG: Does every patient with azotaemia have renal failure? | 13 |
| Before we begin..... | 13 |
| Structural vs functional renal disease..... | 15 |
| Interpreting serum urea and creatinine levels..... | 15 |
| Prerenal Azotaemia..... | 15 |
| Urine SG?..... | 16 |
| Renal Azotaemia..... | 16 |
| If the patient is dehydrated: | 16 |
| Postrenal Azotaemia | 17 |
| Interpreting the Haemogram – More than just the numbers | 21 |
| Identify the Problem..... | 21 |
| Is the anaemia primary or secondary? | 21 |
| Clinical signs relate to rapidity of onset | 21 |
| Is the anaemia regenerative or non-regenerative?..... | 22 |
| How long does the bone marrow take to respond? | 22 |
| Assessment of Anaemia | 22 |

| | |
|---|-----------|
| Reticulocyte counts..... | 22 |
| Cat reticulocytes | 23 |
| Nucleated RBC ratio..... | 23 |
| Spherocytosis..... | 24 |
| Microcytosis | 24 |
| Macrocytosis..... | 25 |
| Schistocytosis | 25 |
| Mechanisms & diseases associated with shistocytosis..... | 25 |
| Heinz bodies | 26 |
| Howell-Jolly bodies | 26 |
| Regenerative anaemia or acute anaemia..... | 26 |
| Haemorrhage or haemolysis?..... | 26 |
| Haemorrhage | 26 |
| Internal Haemorrhage | 27 |
| Haemolysis..... | 27 |
| Immune-mediated Haemolytic Anaemia..... | 28 |
| Primary vs Secondary | 28 |
| Immunoglobulin type..... | 28 |
| Spherocytosis..... | 28 |
| Splenomegaly | 28 |
| WBC | 28 |
| Non-regenerative haemolytic anaemia | 29 |
| Microangiopathic Anaemia | 29 |
| Congenital Haemolytic Anaemia | 29 |
| Infectious Haemolytic Anaemia..... | 29 |
| Drug/Toxins | 30 |
| Non-regenerative anaemia..... | 30 |
| Interpretation of the leukogram in non- leukaemic disorders..... | 31 |
| Neutrophilia | 31 |
| Neutrophilic left shifts..... | 31 |
| What constitutes a left shift?: | 32 |
| Toxic neutrophils | 32 |
| Hypersegmented neutrophils..... | 32 |
| Neutropenia..... | 32 |
| Lymphocytes..... | 33 |
| Reactive lymphocytes | 33 |
| Lymphopenia..... | 33 |
| Lymphocytosis | 33 |
| Monocytosis..... | 34 |
| Eosinophils | 34 |
| Rational Antibacterial Therapy – What works where and why? | 37 |
| Factors influencing the clinician’s choice of antibacterial drug | 37 |
| Key Questions..... | 38 |
| Classification of antibacterial drugs | 38 |
| Mechanism of Action..... | 38 |
| Methods of Bacterial Suppression/Killing..... | 38 |
| Bacteriostatic drugs..... | 38 |
| Bactericidal drugs..... | 39 |
| Predicting the Bacteria Present | 40 |
| Antimicrobial Spectrum..... | 40 |
| Factors affecting the success of antibacterial therapy | 42 |

| | |
|--|----|
| Bacterial Sensitivity | 42 |
| Distribution to the Site of Infection (Pharmacokinetic Phase)..... | 42 |
| How Well Do They Penetrate? | 43 |
| Favourable Environmental Conditions (Pharmacodynamic Phase)..... | 43 |
| Client Compliance | 44 |
| Prophylactic antibacterials in surgery | 46 |
| Common organisms..... | 47 |
| Common organisms..... | 48 |