



Panic Values Table

Prepared by APSA Panic Values eForum and Medical Research Institute Patient Safety Group

إعداد منتدى النقاش الإلكتروني و مجموعة السلامة بمعهد البحوث الطبية

Chemistry

| Test | Low | Possible Effect | High | Possible Effect |
|------------------------------|-------------------|-------------------------|-------------------------------|-------------------------------|
| Albumin | 1.7 g/dL | Hepatic failure | | |
| Amylase | | | >10X ULon (U/L) | Acute pancreatitis |
| Ammonia | | | 110 umol/L | Hepatic encephalopathy |
| Bilirubin total (neonates) | | | >15 mg/dl | Kerniktrus |
| Bilirubin direct (neonates) | | | >2mg/dl | Cholangitis –sepsis |
| Calcium | 6 mg/dL | Tetany | 13 mg/dL | Cardiac arrest |
| Calcium, Ionized | 0.75 mmol/L | Tetany | 1.6mmol/L | Cardiac arrest |
| Chloride | 80 mmol/L | Tremors | 120 mmol/L | Lethargy |
| Cholinesterase (acetyl), RBC | <0.50X LLoN (U/L) | Apnoea | | |
| CO2 | <10 mmol/L | Acidosis (m) | >40 mmol/L | Respiratory failure |
| Creatinine | | | 6.5 mg/dL | Acute renal failure |
| Glucose | 50 mg/dL | Coma | 450 mg/dL | Keto acidosis |
| Iron | | | >55 umol/L (if age <10 years) | Hematochromatosis |
| Lipase | | | >10X ULon (U/L) | Acute pancreatitis |
| Magnesium | 1 mg/dL | | 4.9 mg/dL | Renal failure, hypothyroidism |
| Phosphorus | 2 mg/dL | | 8.9 mg/dL | Heart block |
| Potassium | 2.5 mEq/L | Ventricular tachycardia | 6.5 mEq/L | Cardiac arrest |
| Protein (total) | 3.4 g/dL | Hepatic failure | 9.8 g/dL | Paraproteinemia |
| Sodium | 120 mEq/L | Coma | 160 mEq/L | |
| Urea | | | 200 mg/dL | Acute renal failure |
| Uric acid | | | 13 mg/dL | |

CSF

| Test | Low | Possible Effect | High | Possible Effect |
|-------------------|-------|-----------------|------|-----------------|
| WBC | <4000 | Infection | >30 | Meningitis |
| Blast/tumor cells | | | Any | Malignancy |

Haematology

| Test | Low | Possible Effect | High | Possible Effect |
|------------------|-------------|-----------------|----------------|-------------------|
| Hemoglobin | < 6g/dL | Heart failure | >20 g/dL | Thrombosis |
| Hematocrit | 15% | Heart failure | >50% | Hemoconcentration |
| Platelet Count | <20,000 / L | Bleeding | >1,000,000 / L | Thrombosis |
| Neutrophil Count | <500 / L | Infection | >40000 / L | Hyperviscosity |
| INR | | | >6.0 | Bleeding |
| APTT | | | >100 seconds | Bleeding |
| Fibrinogen | 100 mg/dl | Bleeding / DIC | | |



Alexandria Patient Safety Alliance

| | | | | |
|----------------------|--|--|--|--|
| Morphology | | | Positive malaria smears | |
| | | | Positive intracellular bacteria in WBC | |
| Cross match problems | | | Any positive results | |

Urine analysis

| Test | Low | Possible Effect | High | Possible Effect |
|------------|-----|-----------------|---------|-------------------------|
| Ketenes | | | Present | DKA* |
| Myoglobin | | | Present | Acute renal failure |
| Hemoglobin | | | Present | Intravascular hemolysis |

*DKA: Diabetic keto acidosis

Blood gases

| Test | Low | Possible Effect | High | Possible Effect |
|------------------|-----------|----------------------------|-----------|-----------------------------|
| pH | < 7.2 | Acidosis, life threatening | > 7.6 | Alkalosis, life threatening |
| pCO ₂ | < 20 mmHg | | > 65 mmHg | Respiratory failure |
| pO ₂ | < 40 mmHg | Hypoxia | | |

Microbiology (results could be delayed for several days)

| Finding | Significance |
|--|---------------------|
| Positive blood culture | Septicemia |
| Positive fungal cultures | Immunosuppression |
| Positive CSF cultures | Meningitis |
| Pseudomonas species from eye cultures | Loss of vision |
| Infection in immune-compromised patients | Overwhelming sepsis |

Pathology (results could be delayed for several days)

| Finding | Significance |
|--|-------------------|
| Bacteria in bone marrow or heart specimens | Endocarditis |
| Crescents in kidney biopsy | Renal failure |
| Fat in mucosal biopsies, colonic endoscopic polypectomies, endometrial curettage | Perforation |
| Leukocytoclastic vasculitis | Organ failure |
| Malignancy | <i>Variable</i> |
| Mesothelial cells in endomyocardial or transbronchial biopsies | Perforation |
| Transplant rejection | Loss of graft |
| Uterine contents without villi or trophoblast | Ectopic pregnancy |



Radiology

| Finding | Significance |
|--|------------------------------------|
| Acute aortic dissection | Ischaemia to vital organs |
| Acute deep vein thrombosis | Pulmonary embolism |
| Acute pulmonary embolism | Hypoxia – respiratory failure |
| Acute spinal cord compression | Loss of vital functions |
| Acute testicular/ovarian torsion | Necrosis – ischaemia |
| Ectopic pregnancy | Shock – rupture |
| Intracranial hemorrhage | Coning |
| Ischemic bowel | Sepsis |
| Leaking abdominal aortic aneurysm | Rupture |
| Massive hemoperitoneum on CT or ultrasound | Shock |
| Misplacement of tubes or catheters | <i>Variable</i> |
| New perforated viscus | Sepsis |
| Pneumothorax, if unsuspected | Respiratory embarrassment, hypoxia |
| Tension pneumothorax | Respiratory embarrassment, hypoxia |
| Unstable spine fracture | Spinal cord compression |

Therapeutic drugs

| Test | High | Possible Effect |
|---------------|---|---------------------------------------|
| Acetaminophen | >660 umol/L (>4 hrs post ingestion) | Liver failure, encephalopathy |
| Carbamazepine | >63 umol/L | Ataxia, confusion |
| Digoxin | >3.5 nmol/L (>6 hrs post dose) | Arrhythmia |
| Lithium | >2.5 mmol/L | Agitation |
| Phenobarbital | >250 umol/L | Coma, renal failure |
| Phenytoin | >130 umol/L | Seizers |
| Salicylate | >3.0 mmol/L | Acidosis, GIT bleeding, renal failure |
| Theophylline | >220 umol/L | Supraventricular tachycardia |
| Amitriptyline | >1.8 umol/L | Coma |
| Gentamicin | Trough >2.0 mg/L (>8 hours post dose for multiple daily dosing) | Renal failure |
| Valproic Acid | >1400 umol/L | Cardiac arrest, apnea |

Toxic drugs

| Test | High | Possible Effect |
|------------------|---------------|-----------------|
| Ethanol (plasma) | >33 mmol/L | Lactic acidosis |
| Lead | >3.0 umol/L | Porphyria |
| Methanol | All positives | Blindness |