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Coding queries & audit discussion cases

The May 2014 coding queries and audit discussion cases are now available to view on our website:


Coding queries
1. Fibroepithelial polyp
2. Cancelled same day chemotherapy
3. High BMI
4. Attempted hanging with no injury
5. Prophylactic IV fluids before CT scan
6. Metabolic acidosis in diabetes patient
7. Divarification of rectus muscle with redundant abdominal skin
8. Capsular contracture of breast implant
9. Sepsis with organ failure

Audit discussion cases
1. Variceal screening in liver cirrhosis patient
2. Booked elective caesarean, presenting in labour
3. Contaminant in blood culture

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Delivering a Healthy WA
Clinical review: Acidosis

Adequate pH balance is vital for normal bodily functions. The normal arterial blood pH range is 7.35 to 7.45. This balance is maintained by a complex interaction of intracellular and extracellular chemical mechanisms interacting with the respiratory and renal systems. If there is a disorder of any of these mechanisms, acidosis or alkalosis may occur. This indicates an underlying disease process affecting these mechanisms. The underlying condition needs to be identified and treated appropriately.

Acidosis is the process of accumulation of acid or depletion of base in the blood and tissues. The pH of the blood is <7.35 (also known as acidaemia).

The opposite disorder is Alkalosis, a process where there is too much base in the blood and tissues. The pH of the blood is >7.45 (Albert et al. 2012, 16).

There are two types of acidosis – respiratory and metabolic.

Respiratory acidosis

In respiratory acidosis (also called hypercapnic acidosis, carbon dioxide acidosis) the pH is reduced primarily due to an increase in carbon dioxide (CO2) in the blood (hypercapnia). A common cause is Chronic Obstructive Pulmonary Disease (COPD).

<table>
<thead>
<tr>
<th>Causes of respiratory acidosis</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lung parenchyma</td>
<td>Chronic lung disease, COPD, emphysema, bronchitis, pneumoconiosis, ARDS, pneumonia, pneumothorax</td>
</tr>
<tr>
<td>Airway</td>
<td>Obstruction, aspiration, asthma</td>
</tr>
<tr>
<td>Central nervous system</td>
<td>Drugs (anaesthetics, opioids, sedatives), stroke, infection, head injury, brain tumours</td>
</tr>
<tr>
<td>Neuromuscular</td>
<td>Chest deformities, kyphoscoliosis, poliomyelitis, myasthenia gravis, muscular dystrophies, chest injuries</td>
</tr>
<tr>
<td>Other</td>
<td>Obesity, hypoventilation</td>
</tr>
</tbody>
</table>

(Longo et al. 2012, 371)

Metabolic acidosis

In metabolic acidosis (also called non-respiratory acidosis) the pH is reduced due to an increase in the body’s production of acid, a decrease in the renal excretion of acid, or increase in excretion of bicarbonate (Albert et al. 2012, 16).
### Metabolic acidosis (continued)

#### Causes of metabolic acidosis

<table>
<thead>
<tr>
<th>Causes</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ketoacidosis</td>
<td>Diabetes mellitus (DKA), starvation, alcohol</td>
</tr>
<tr>
<td>Lactic acidosis</td>
<td>Hypoxia (e.g. ischemia of bowel), hypoperfusion (e.g. shock, sepsis), metabolic conditions (e.g. diabetes mellitus), Biguanide (Phenformin, Metformin) toxicity, liver disease, thiamine deficiency, seizures, rhabdomyolysis, and alcohol excess (Harris, Nagy and Vardaxis 2010, 975).</td>
</tr>
<tr>
<td>Renal failure</td>
<td>Acute and/or chronic. The many acids, urea, sulphates, phosphates and proteins with acidic activity are not cleared and accumulate in the body.</td>
</tr>
<tr>
<td>Toxins</td>
<td>Salicylates, methanol, ethanol, formaldehyde, paraldehyde, sulphates, Metformin</td>
</tr>
<tr>
<td>Gastrointestinal bicarbonate loss</td>
<td>Diarrhoea, fistula, stoma, drugs e.g. cholestyramine bile acid diarrhoea</td>
</tr>
<tr>
<td>Renal tubular acidosis (RTA)</td>
<td>Defects of parts of the renal tubule, with reduced excretion of acid. May occur in isolation from other renal dysfunction i.e. normal creatinine; or may overlap with renal failure (Harris, Nagy and Vardaxis 2010, 1492).</td>
</tr>
<tr>
<td>Hyperkalaemia</td>
<td>Drug induced e.g. Spironolactone, Trimethoprin, ACE-inhibitors, NSAIDS, Cyclosporin</td>
</tr>
<tr>
<td>Other</td>
<td>Acid loads in hyperalimentation, expansion acidosis in rapid saline infusion, severe dehydration, inhalant abuse.</td>
</tr>
</tbody>
</table>

(Longo et al. 2012. 365, 368-369, 371)

### Diagnosis

#### Symptoms and signs.

The symptoms and signs of acidosis depend on the underlying condition. Metabolic acidosis causes deep rapid breathing, “fruity” odour of acetone on the breath (in ketoacidosis), dehydration, confusion, lethargy, seizures, or coma. Respiratory acidosis is usually associated with shortness of breath.

#### Investigations

Investigations include: arterial blood gases (ABG), urinalysis (ketones, pH, and glucose), electrolytes, blood glucose and renal function (urea and creatinine), full blood picture, toxicology screen, imaging.

The diagnosis of acidosis is complex. Different metabolic processes may occur simultaneously e.g. the body attempting to compensate for respiratory acidosis with metabolic alkalosis (Dr N. Hadlow, personal communication May 28, 2014).

### Treatment

Treatment is primarily of the cause e.g. diabetes mellitus, and specific electrolyte management.

Diabetic ketoacidosis and lactic acidosis represent two of the most serious acute complications of diabetes. Patients with diabetes can present with coexisting conditions such as CKD and hyperkalaemia. These can also produce a metabolic acidosis.

### References


Harris, Peter, Nagy Sue and Vardaxis Nicholas. eds. 2010 Mosby’s Dictionary of Medicine, Nursing & Health Professions. 2nd ed. Sydney: Mosby Elsevier.

Coding tip: Non-healing wound

“Non-healing” or “delayed healing” of wounds may be caused by infection or dehiscence, in which case these specific conditions should be coded.

In the absence of infection or dehiscence, coding of “non-healing” will depend on the type of wound. For traumatic wounds, the original wound should be coded e.g. laceration. However, in the case of surgical wounds, assign T81.8 Other complications of procedures, not elsewhere classified by following the index pathway:

Complications (from)(of) - procedure (surgical or medical care) -- specified NEC T81.8

followed by external cause codes reflecting the original procedure that created the surgical wound.

Examples of factors that can impede wound healing:

- Diabetes mellitus
- Anaemia
- Infection
- Medication e.g. corticosteroids
- Nutritional problems e.g. vitamin and zinc deficiency
- Vascular disease
- Radiotherapy

(Daley 2014)

When a complication of medical care is documented to be a contributing factor impeding wound healing (e.g. adverse drug effect; radiotherapy), external cause codes can be added to demonstrate this, as per the following example.

Example

“Non-healing wound, on a background of sarcoma excision with pre-operative radiotherapy. Radiotherapy has prevented wound healing”.

T81.8 Other complications of procedures, not elsewhere classified
Y83.8 Other surgical procedures
Y92.22 Place of occurrence, health service area
U73.8 Other specified activity
Y84.2 Radiological procedure and radiotherapy as the cause of abnormal reaction, or of later complication, without mention of misadventure at time of procedure
Y92.22 Place of occurrence, health service area
U73.8 Other specified activity

If clearly linked in the documentation, a condition stated to be impeding wound healing may be coded if criteria in point 2 Problems and underlying conditions are met in ACS 0001 Principal diagnosis.

Reference
Back to basics: Failure to progress in labour

Failure to progress (FTP) in labour often requires intervention such as augmentation or instrumental delivery.

FTP itself is not a condition, rather a description that the labour is not progressing due to an underlying cause. Coders should always look for documentation to determine the cause of FTP. Some causes include:
- Malpresentation of fetus
- Poor/inadequate contractions
- Cephalopelvic disproportion

When coding FTP, a code for the underlying cause should be assigned. If there is no documentation of the cause, O62.9 Abnormality of forces of labour, unspecified can be assigned following the index pathway:
Failure, failed -- progress (in labour) NEC O62.9

(See also Coding Q & A, December 2012)

Coder spotlight

This issue we interviewed Jillian Dunnette from Royal Perth Hospital…

How long have you been coding?
Almost four years

At which hospital did you commence your coding career?
Royal Perth Hospital

What made you decide to become a clinical coder?
I wanted a career change from nursing

What do you like most about clinical coding?
Most things – the interesting cases here at Royal Perth, the challenge of finding the right codes, the constant wonder at the workings of the human body.

What do you like least about clinical coding?
The frustration when I cannot find the right code or do not feel 100% sure I have the right one, and the underlying concern that I may have missed something important.

Have you recently undertaken coding workshops, conferences, courses etc? Or plan to in the future?
I recently studied the Intermediate Coding Course run by HIMAA, and passed. I also had 50 records audited and succeeded in achieving higher than the required 90% pass mark so have gone up a level in coding. I would like to attend a conference in an exotic location some day!

Coders guide to use of nursing and allied health documentation

A guide has been developed to assist coders in the use of nursing and allied health documentation for clinical coding purposes. It is now available on our website:

Separate guides for nursing and allied health professionals have been developed and circulated to WA hospitals, and are also available on our website.
What casemix/specialties do you find most challenging in your current role?
I find that neurological cases can sometimes be difficult.

The casemix at RPH covers multi-trauma, serious burns, cardiothoracic- transplants, and is the state maxillo-facial unit. RPH handles approximately 70% of the state’s plastics cases as well as patients with serious medical illnesses who are transferred from country hospitals. Many admissions have long-term mechanical ventilation and multiple surgeries, which makes for complicated coding. The casemix is complex, but provides variety and a challenge to myself and my fellow coders, and the time at work flies.

Describe the coding service at your hospital
There are 18 coders here at Royal Perth. We are located on the lower ground floor in a peaceful, clean and organised environment. We are fortunate to have lectures from surgeons and specialists from time to time; also ICU nursing staff who explained certain procedures to us, which really helped to visualise what we were coding. It seems that clinicians have gradually come to respect the work of the coder, as the standard of documentation has become very detailed and thorough, which helps in providing quality coding.