Quality Manager
Pathology Laboratory
Biochemistry Department
Town
County
Country

Increasing numbers of Participants are experiencing some difficulty in receiving our notification e-mails to Trust-based e-mail addresses. To ensure that we can contact you by e-mail (and maintain contact with you if you should move to another Trust) we are asking Participants with Trust-based e-mail addresses to provide us with an alternative (non-Trust-based) e-mail address. Please notify us of this by sending an e-mail to birminghamquality@uhb.nhs.uk, remembering to state your Participant (BAnnnn) number. (We can accommodate a maximum of two e-mail addresses per Participant.) We would suggest that groups supply us with an e-mail address for each of two different members of their group.

Thank you

Jane French
Scheme Manager

The e-mail address (or addresses) we are currently using to contact you is shown below. If no e-mail address is displayed or the information shown is incorrect, please email us with an appropriate contact e-mail address as soon as possible.

Since the scheme is designed to be *'paper-free'* , please direct any email queries to birminghamquality@uhb.nhs.uk

Participants are expected to return comments for a minimum of 50% of Cases. Therefore, you must have commented on at least 6 out of the previous 12 Cases.
Participants need to have been registered for at least 6 Cases before a return-rate is calculated.
Participants must achieve a rolling time-window score of 0.5 or above to pass the time-window score criterion.

You have participated in Cases out of a possible Cases.
You are currently passing the 50% return-rate criterion.
You do not have a time-window score.

An 82 year old man presented to Accident and Emergency Department after collapsing at home. He was then transferred to a general medical ward. The clinical details on the ward request card were 'abdominal pain - cause?' Serum results are as follows:
Sodium 138 mmol/L (134 - 145), Potassium 3.9 mmol/L (3.6 - 5.3)
Urea 22.2 mmol/L (2.8 - 7.0), Creatinine 247 µmol/L (62 - 133),
Albumin 21 g/L (35 - 49) Adjusted calcium 2.76 (2 .15 - 2.60)
Bilirubin 19 µmol/L (3 - 21), Alkaline phosphatase 550 IU/L (38 - 126)
ALT 243 IU/L (7 - 56), Amylase 116 IU/L (30 - 110)
U&Es requested on the sample from Accident and Emergency were similar to those above.

Please type the comment you would append to the report in the space below.

Your PTS is 1.12
[Participant Time-window Score]

(the mean of all your PCMs during the 12-case time-window)

Median PTS at this case for all participants is 1.09

Your comment

AKI, raised liver enzymes and calcium; check CRP, glucose, troponin, CK, PTH and myeloma screen. Monitor amylase; urine dipstick. Abdominal imaging.

Your PCM is 1.00
[Participant Case Mark]

(the PCM is the mean mark awarded to you for case 387)

Median PCM for this case for all participants is 1.00

Summary from the Scheme Organisers

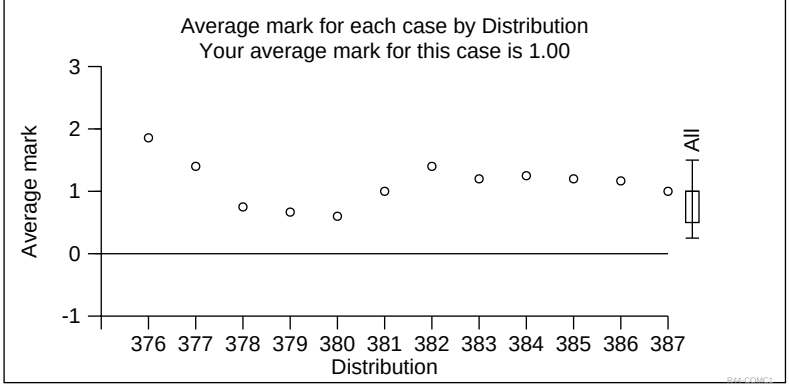
This complex case attracted 235 participants, with all but 7 receiving a positive mark (25th percentile 0.5, median 1.00, 75th 1.00). Assessors commented that this was a difficult data set to which to add value. However, those participants who commented on the most significant abnormalities i.e. renal impairment and severe hypoalbuminaemia, tended to be awarded higher marks. This case was first distributed as Case 110 in 2001. The assessors at that time also commented that it was a difficult case and that making no comment may be appropriate.

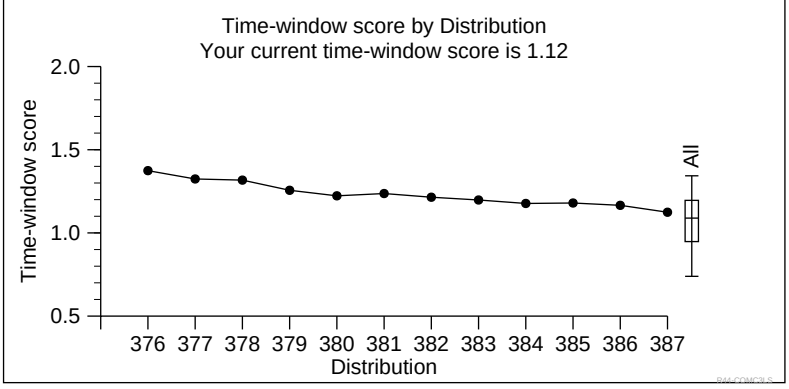
With the introduction of the Patient Safety Alert on the identification of acute kidney injury (NHS/PSA/D/2014/010) most laboratories would be likely to add an auto comment to this creatinine result. Assuming there is no baseline for comparison, the algorithm for detecting acute kidney injury (AKI) would flag the result as? AKI or CKD and suggest a repeat sample. The patient is at high risk of AKI in view of co-existing liver disease and his age (>75 years) but urgent clinical correlation is required. The presence of hypercalcaemia may be more in keeping with AKI than CKD. (For further information see RCP Acute Toolkit 12- Acute Kidney Injury and intravenous fluid therapy, September 2015).

Most participants suggested additional investigations but the most commonly suggested were PTH, phosphate, GGT, myeloma screen and ultrasound scan. The possibility of malignancy was mentioned by many participants and there was also general agreement that the slightly elevated serum amylase was consistent with renal impairment but that pancreatitis could not be excluded. Several participants commented that the adjusted calcium may not be reliable in view of the low serum albumin.

In the event the patient's renal function deteriorated and he developed pneumonia and sepsis. He died 3 months after admission. A post-mortem revealed evidence of chronic pancreatitis, fatty infiltration of the liver and some congestive changes but no evidence of malignancy.

*****Summary continued overleaf...*****





You have participated in 12 Cases out of a possible 12 Cases.
You are currently passing the 50% return-rate criterion.
Your time-window score is 1.12. You are currently passing the rolling time-window score criterion.

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and provides this UK NEQAS service from PO Box 3909, Birmingham B15 2UE, UK
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The Scheme Organiser is Jacqui Osypiw. The Manager is Jane French.
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Lower scoring comments were:
'Albumin adjusted calcium 3.14 mmol/L. This may explain the uraemia. LFTs suggest intrahepatic cholestasis. Pursue cause of hypercalcaemia. Consider plasma PTH level and liver ultrasound scan as initial investigations' and *'CKD more likely than AKI. Slightly ^amylase due to renal impairment rather than pancreatitis. LFTs - mixed hepatocellular and cholestatic picture. Bone ALP may be contributing to total ALP (add isoenzymes, vit. D, PTH). Malignancy? Add CEA and CA199'*

Low scoring comments from 2001 were:
Please state full drug history. Suggest imaging to look for evidence of cardiac failure or metastases, and request FBC. Why ALT up, check medication AST & CK.
Consider secondaries. Do Hb. AMY noted' and 'Needs glucose CRP FBC & imaging to seek DM, sepsis, & neoplasia. ?? pre-renal, give i.v. saline slowly & monitor.'

Median scoring comments were:
'Please rule out AKI. Note amylase is not a specific marker of pancreatitis and may be raised with other pathology eg DKA, cholecystitis, bowel inflammation/ infarction. Lipase is more specific. Suggest USS & rpt LFT, U&E Calcium with glucose and CRP' and *'Raised urea, creatinine, Ca & liver enzymes. ?drug/alcohol hx, cirrhosis, malignancy, bone pain, anaemia & infection. EP, PSA, PTH, GGT, Lipids, CRP, Liver autoab & Hep screens have been arranged. Also suggest FBC, INR & U/S or CT scan of liver'*

High scoring comments were:
'Renal impairment: may be acute or chronic-?earlier results. Liver profile: mixed hepatocellular/cholestatic picture; low albumin may indicate chronicity. Imaging eg CT indicated. High Adjusted Calcium: limitations of calculation with low albumin' and *Hypercalcaemia, obstructive hepatocellular picture and ?AKI. Exclude drugs/alcohol, check urine dipstick/ACR, measure PTH and perform abdominal U/S or CT, as possibility of malignancy. Borderline amylase does not exclude pancreatitis.*

High scoring comments from 2001 were:
'Renal impairment, low albumin, obstructive liver picture. Probably not pancreatitis. ?Malignancy. Would not normally comment on such results unless consulted& given more of clinical picture' and *'*?Cause of hypercalaemia. LFTs suggest hepatic obstruction or space occupying lesion. ?On any medication. Normal amylase does not exclude pancreatitis.Suggest rpt Ca PTH PSA serum & urine EPS.'

Best wishes
Jacqui, Jane, & Anne-Marie

You require a minimum of six data points to have a time-window score. Since the marks are allocated for added value, all positive scores reflect added value the higher the mark, the better! The 25th, 50th and 75th centiles are currently 0.95, 1.09 and 1.2 respectively.