Validation of Albumin Creatinine Ratio Point of Care Devices for Community Testing

Methods

245 unselected urine samples

POC devices (urine albumin:creatinine ratio):
- Siemens Clinitek®
- Minuteful kidney®
- Allegro®

Results

Parameter for detecting uACR >3.39 mg/mmol and above

<table>
<thead>
<tr>
<th>Device</th>
<th>Sensitivity % (95%CI)</th>
<th>Specificity % (95%CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Allegro®</td>
<td>97.1% (92.7% - 99.2%)</td>
<td>92.9% (85.3% - 97.4%)</td>
</tr>
<tr>
<td>Minuteful Kidney®</td>
<td>95.5% (90.9% - 98.2%)</td>
<td>47.8% (37.1% - 58.6%)</td>
</tr>
<tr>
<td>Siemens Clinitek®</td>
<td>93.5% (88.5% – 96.9%)</td>
<td>80.0% (70.2% – 87.7%)</td>
</tr>
</tbody>
</table>

Semi quantitative thresholds:
- Normal: <3.39mg/mmol
- Abnormal: 3.39mg/mmol – 33.9mg/mmol
- High abnormal: >33.9mg/mmol

Conclusion: Performance of the POC ACR devices paralleled their accessibility and ability to be mobilised. These findings allow healthcare providers to understand the limitations of test performance when employing POC testing to screen for CKD.

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