A novel replacement and maintenance regimen for vitamin D deficient HIV positive patients

S Davies, J Freemantle, C Stradling, G Hickinbottom, J Short, M van der Linde and S Taylor
Birmingham Heartlands Vitamin D replacement protocol

- Hypophosphataemia (<0.65 mmol/l) or hypocalcaemia (<2 mmol/l) or raised ALP or TB or housebound or taking EFV

Measure plasma 25-OH Vitamin D level

- Level ≤ 50 nmol/l
  - Ergocalciferol (D2) 50,000 IU weekly x 12 weeks
  - Assess adherence at 12 weeks
  - Adherence = consumption of > 80% doses < 20 weeks
  - D2 50,000 IU monthly indefinitely
  - Re-assess plasma 25-OH vitamin D at 12-monthly intervals

- Level ≥ 50 nmol/l
  - Monitor plasma Ca, phosphate and ALP as per clinical need
  - Non-adherence = consumption of < 80% doses < 20 weeks
  - Repeat protocol

Results and Conclusions

- A median rise of 61.7 nmol/l (p<0.05) was observed between baseline and week 14
- 88.4% of patients’ VD was normalised after the correction phase
- 80.3% remained corrected after 12 weeks of the maintenance phase
- No patients experienced toxicity or had elevated corrected calcium levels
- The main identified reason for ongoing VD deficiency was poor adherence and was significantly associated with vitamin D status at 12-weeks (P = 0.026; N = 31)
- Our novel regimen effectively corrects and maintains vitamin D levels in HIV patients

<table>
<thead>
<tr>
<th></th>
<th>Median Vitamin D level (nmol/l)</th>
<th>Number tested</th>
<th>P-value</th>
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</thead>
<tbody>
<tr>
<td>Baseline</td>
<td>22.8</td>
<td>106</td>
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<tr>
<td>Week 14</td>
<td>84.5</td>
<td>78</td>
<td>&lt;0.05</td>
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<td>Week 32</td>
<td>72.3</td>
<td>53</td>
<td>&lt;0.05</td>
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Plasma Vitamin D Correction and maintenance with Ergocalciferol