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Stopping IM B12: a collaborative service development between primary and secondary care

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INTRODUCTION

- Vitamin B12 is essential for:
  - Formation of red blood cells
  - Development, myelination and maintenance of the CNS
- B12 is checked in macrocytic anaemia screen, dementia screen or in patients with concerning neurological symptoms. It is also often checked in non specific lethargy.
- Issues of B12 testing:
  - There is no 'perfect' B12 assay
  - Confirming a diagnosis of pernicious anaemia is difficult: Lack of schillings test
  - Intrinsic factor antibody testing has high sensitivity but low specificity and gastric parietal cell
  - Additional B12 assay testing is often unavailable
- B12 treatment advice is available in UK trusts and from the British Society of Haematology.
  - Its clear how to manage those with lifelong IM B12 requirements other patients may not require this
- There are no specific guidance regarding stopping B12 and the likelihood of patients needing to restart B12.
- This service development project aims to address this.

AIM

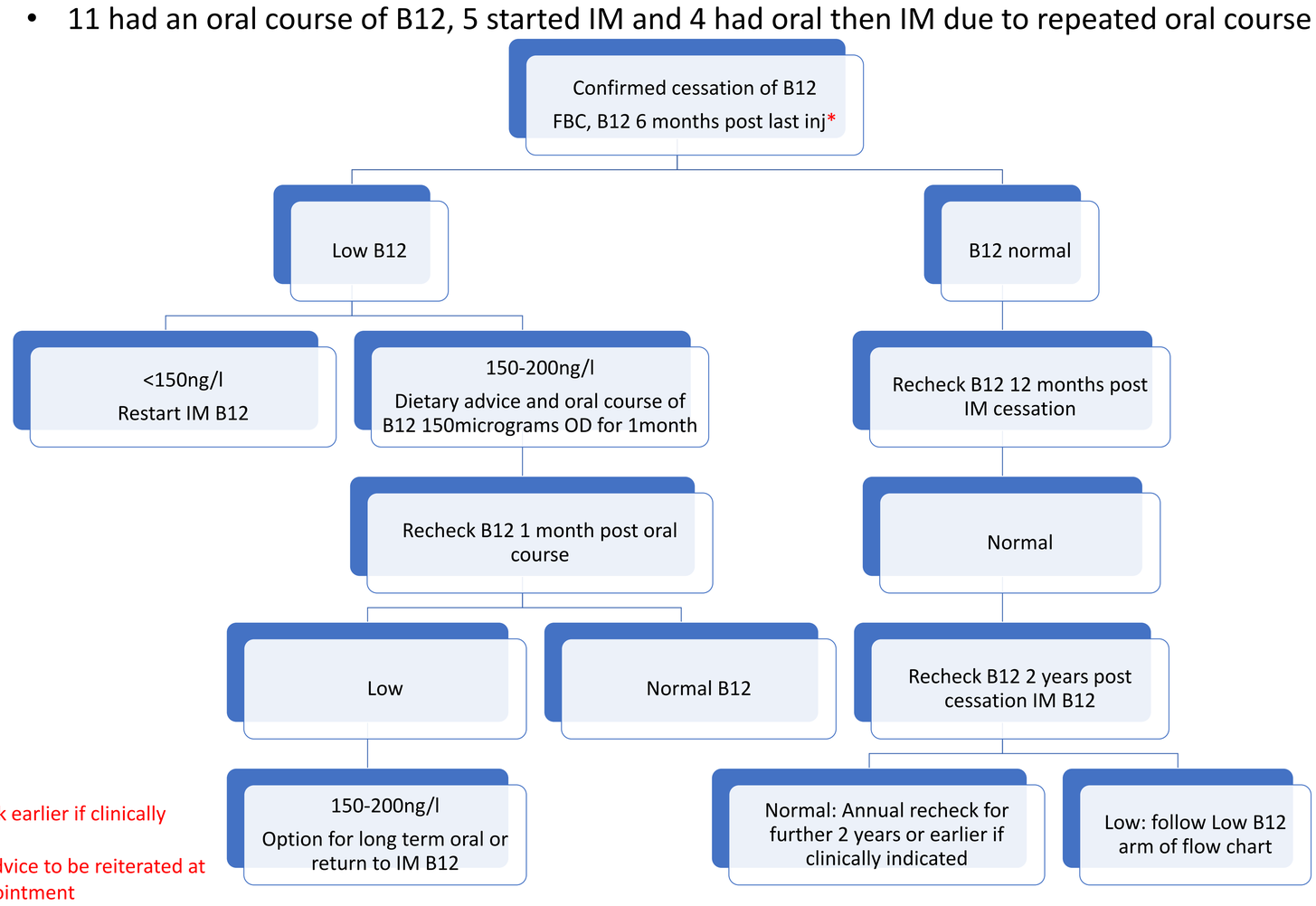
- Service development project collaboration within 15 000 patient GP practice
- To review IM B12 usage and provide structured guidance for IM B12 cessation where appropriate

METHOD

- Patients receiving IM B12 were identified through pharmacy records
- Patients with confirmed Pernicious anaemia (PA), gastric band or required to stay on IM for other reasons were identified and excluded
- The remaining patients were reviewed, with baseline data assessed pre-IM B12.
- The service improvement was discussed in person or by telephone
- All patients were provided with dietary advice
- A guidance flow chart was developed. Blood samples were planned for 6, 12 and 24 months post last injection, and then annual
- See flow chart under results

RESULTS

- 247 had B12 IM on their medication list; 11 were excluded
  - 79 remained on B12; Indications were Haematological (25), GI (44) and GP discretion/other (10)
- Intrinsic factor (IF) in whole cohort was checked in 63.9% (151/236), data missing for 5.9% (14)
  - Of those who had IF checked:10 positive and remained on IM B12
- Cessation of B12 patients: 157 had IM B12 stopped, 105 were female.
  - Mean Hb on starting B12 was 127 g/l;
  - Majority were normocytic(64%), 39 had high MCV, 9 had no data, 8 had a low MCV. 6 had classical macrocytic anaemia
- 133/157 completed 2 years of monitoring or longer (84.7%).
  - 9(5.7%) DNA'd follow-up blood tests despite repeated invites; 4 moved GP practice
  - 17 patients have died during the project: 6 completed >2 years off B12 before death.
- 20 restarted B12 (data reviewed at two years), mean time from stopping to restarting B12 was 22.5 months (range 17–36 months).
  - Median % of B12 below normal range was 9% (range 1% >38%).
    - 11 had an oral course of B12, 5 started IM and 4 had oral then IM due to repeated oral course



CONCLUSIONS

- Stopping B12 in selected patients following a structured follow-up of blood tests is safe
- Reducing patient exposure to unnecessary medication and improved medicines management.
- It should be remembered the limitations of B12 testing; patient education is essential and patients should seek GP advice if there are clinical concerns
- Data will be re-reviewed at 4 years

❖ At time of this publication COVID-19 pandemic had commenced, BCSH guidance for IM B12 was released

Planned delay/stopping of IM B12 in patients who were considered suitable for stopping

This provides a structured process at a timely intervention for those who require their B12 reviewed

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