

# DIAGNOSING AND TREATING PERNICIOUS ANAEMIA

## For Medical Professionals

The British Committee for Standards in Haematology issued their Guidelines for the Diagnosis and Treatment of Cobalamin and Folate Disorders in June 2014.

This factsheet has been produced for primary healthcare professionals.

It also includes findings of the survey of members of the PA Society, published in April 2014 .

## Diagnosing Cobalamin Deficiency

### The Serum B12 Test is not a good indicator of the patient's B12 Status:

- “The clinical picture is the most important factor in assessing the significance of test results assessing cobalamin status because there is no ‘gold standard’ test to define deficiency”.
- “Definitive cut-off points to define clinical and subclinical deficiency states are not possible, given the variety of methodologies used and technical issues, and local reference ranges should be established”
- “In the presence of discordance between the test result and strong clinical features of deficiency, treatment should not be delayed to avoid neurological impairment”.

### Macrocytosis is not always present in cobalamin deficiency:

- “an elevated mean cell volume (MCV) is not a specific indicator of cobalamin deficiency”
- “The absence of a raised MCV cannot be used to exclude the need for cobalamin testing because neurological impairment occurs with a normal MCV in 25% of cases”

### Children:

- “Reduced serum cobalamin levels in infancy in the presence of clinical features should be treated promptly to prevent long term neurological sequelae”

## Diagnosing Pernicious Anaemia

### Intrinsic Factor Antibody Test:

- “IFAB is positive in 40–60% of cases i.e., low sensitivity, and the finding of a negative IFAB assay does not therefore rule out Pernicious Anaemia (hereafter referred to as AbNegPA)”.
- “Patients suspected of having Pernicious Anaemia should be tested for IFAB. Patients found to be positive should have lifelong therapy with cobalamin. Patients negative for IFAB, with no other causes of deficiency, may still have Pernicious Anaemia and should be treated as anti-IFAB-negative Pernicious Anaemia. Lifelong therapy should be continued in the presence of an objective clinical response”
- “All patients with anaemia, neuropathy or glossitis, and suspected of having Pernicious Anaemia, should be tested for anti-IFAB regardless of cobalamin levels”

## Treating Pernicious Anaemia

### Parenteral treatment is preferred:

- “the efficacy and cost–effectiveness of oral treatment in wider population-based settings has yet to be established. There are arguments against the use of oral cobalamin in initiation of cobalamin therapy in severely deficient individuals who have poor absorption, especially due to pernicious anaemia”.
- “In patients presenting with anaemia, a reticulocyte response should be evident by 7–10 days provided the patient has adequate levels of iron and folate”

**Once treatment of Pernicious Anaemia has started no further testing for cobalamin levels is required.**

### **Treatment of Pernicious Anaemia with Neurological Involvement:**

“Standard initial therapy for patients without neurological involvement is 1000 µg intramuscularly (i.m.) three times a week for 2 weeks. The BNF advises that patients presenting with neurological symptoms should receive 1000 µg (i.m.) on alternate days until there is no further improvement”.

### **Folate**

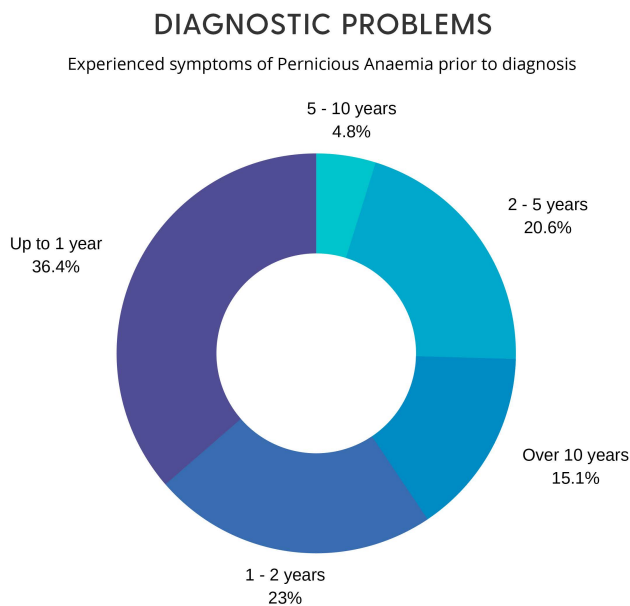
“In the presence of strong clinical suspicion of folate deficiency, despite a normal serum level, a red cell folate assay may be undertaken, having ruled out cobalamin deficiency”

### **Prevalence**

Vitamin B12 Deficiency is widespread, maybe as many as 1:10 of the population may be deficient caused by inadequate diet, medicines (PPI's, Antacids and Contraceptive Pill etc.) or Atrophic Gastritis. Autoimmune Metaplastic Atrophic Gastritis (PA) is considered to be the main cause of B12 Deficiency in the developed world.

### **Treatment**

48% of patients considered their treatment to be 'very poor, poor or inadequate'



1. Devalia V, Hamilton M, Molloy A; Guidelines for the Diagnosis and Treatment of Cobalamin and Folate Disorders; British Journal of Haematology, 2014, 166, 496-513
2. Hooper M, Hudson P, Porter F, McCaddon A; Patients Journeys; the diagnosis and treatment of Pernicious Anaemia; British Journal of Nursing 2014; 23;7;16-21.