

ASCORBIC ACID

The Pan Mersey Area Prescribing Committee does not recommend the prescribing of ASCORBIC ACID for any indication, other than scurvy.

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The 'off-label' use of ascorbic acid for concurrent treatment in patients taking iron for iron-deficiency anaemia is not recommended. (This recommendation also applies to all patients taking iron for iron-deficiency anaemia, who may be taking a proton pump inhibitor.)

The British Society of Gastroenterology (BSG) concluded that there are no data for the effectiveness of ascorbic acid in treating iron-deficiency anaemia [1]. Routine co-prescription of ascorbic acid with iron is not recommended.

Patients wishing to continue taking ascorbic acid with their iron supplement can take their iron supplement with a glass of orange juice, which contains ascorbic acid.

The British National Formulary lists only the treatment or prevention of scurvy as an indication for ascorbic acid.[3]

Note: Patients who are not eligible for treatment under this statement may be considered on an individual basis where their GP or consultant believes exceptional circumstances exist that warrant deviation from the rule of this policy. In this situation, follow locally defined processes.

ASCORBIC ACID

Effectiveness

Dietary iron is found in two basic forms, either as haem iron (from animal sources) or non-haem iron (from plant sources). Haem iron is the most bioavailable form of iron. However, predominantly iron in all diets is non-haem iron, found in cereals, vegetables, pulses, beans, nuts and fruit. Absorption of non-haem iron is affected by various factors in food. Phytate (in cereals and pulses), fibre, tannins (in tea) and calcium can all bind non-haem iron in the intestine, which reduces absorption. However, vitamin C can enhance the absorption of non-haem iron when foods or drink containing both vitamin C and non-haem iron are consumed in the same meal. [2] Acute high doses of vitamin C are occasionally associated with diarrhoea and intestinal discomfort. [2] Ascorbic acid (250-500 mg twice daily taken with the iron preparation) may enhance iron absorption, but there are no data for its effectiveness in the treatment of iron deficiency anaemia (IDA). [1] In the British National Formulary (BNF) the compound preparation containing iron and ascorbic acid is not prescribable on the NHS. [3] There are also no data to indicate that proton pump inhibitors cause IDA in humans. [1]

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Safety

Ascorbic acid should not be given to patients with cardiac dysfunction. It is rarely necessary to prescribe more than 100mg daily except early in the treatment of scurvy [3].

Cost

Pan Mersey £102,000/year

28 tablet pack:

50mg £15.05

100mg £14.30

200mg £19.86

500mg £26.87

Patient factors

Patients treated for iron-deficiency anaemia with oral iron and receiving ascorbic acid to increase the amount of iron absorbed, should have their ascorbic acid de-prescribed.

Advise that if they wish to continue taking ascorbic acid, they can take their oral iron with a glass of orange juice.

Treatment with oral iron should not exceed 3 months after correction of anaemia. [4]

Prescribing information

Prescribing of ascorbic acid is not recommended for any indication, other than scurvy.

References

1. Goddard, Andrew F, et al., et al. Guidelines for the management of iron deficiency anaemia. [Online] 2011. [Accessed March 2019.] <https://www.bsg.org.uk/resource/guidelines-for-the-management-of-iron-deficiency-anaemia.html>
2. British Nutrition Foundation. Iron. [Accessed March 2019.] <https://www.nutrition.org.uk/nutritionscience/nutrients-food-and-ingredients/minerals-and-trace-elements.html?limit=1&start=8>
3. BNF. Ascorbic acid: List of drug interactions. London: BMJ Group and Pharmaceutical Press, 2018.
4. eMC. SmPC: Ferrous Sulfate 200mg coated tablets. [Accessed March 2019] <https://www.medicines.org.uk/emc/>