Position Statement

Prescribing of multivitamins and phenylalanine-free amino acid substitutes for adults and children with phenylketonuria (PKU)

Prescribing recommendation:

Multivitamins

The prescribing of multivitamins for adults and children with phenylketonuria is recommended in Lancashire and South Cumbria following initiation by a specialist – **LMMG RAG status "Amber0"**

Multivitamins are appropriate for PKU patients who use phenylalanine-free amino acid substitutes which are not formulated with multivitamins. There is no requirement to use specific multivitamins for people with PKU (e.g. Phlexy-Vit). Therefore, the choice of multivitamin should be in line with local commissioning arrangements.

Phenylalanine-free protein substitutes

The prescribing of phenylalanine-free amino acid substitutes on FP10 prescription for adults with phenylketonuria is recommended in Lancashire and South Cumbria following initiation by a specialist – **LMMG RAG status "Amber0"**

Product choice

The tertiary centre in Salford for adult inherited metabolic disorders have agreed partnerships with 3 different companies who facilitate protein substitutes for patients to help manage their PKU along with other MDT intervention:

Nutricia
NutriciaMetabolics - Phenylketonuria

Vitaflo
Product range | Nestlé Health Science (nestlehealthscience.com)
(clink on products > Phenylketonuria)

Cambrooke
Cambrooke UK

The below companies only provide tablets for PKU specific to patient who cannot tolerate liquid/powder supplements.

metaX XPhe minis (prominpku.com)
PKU EASY Microtabs - Galen Medical Nutrition

Vitamins

The majority of the PKU protein substitutes include the required vitamins and minerals. However, there are some supplements such as the GMPro mix ins powder (Nutricia Metabolics) that don't contain vitamins. In this case, it is advised that patients use over the counter vitamins or if preferred, Nutricia produce their own phlexy-vit range to use alongside the substitutes.

Background

Phenylketonuria (PKU) is a rare autosomal recessive inborn error of phenylalanine metabolism caused by variants in the gene encoding phenylalanine hydroxylase (PAH). PAH normally converts phenylalanine into tyrosine. PAH deficiency leads to accumulation of phenylalanine in the blood and brain. Untreated, PKU is characterized by irreversible intellectual disability, microcephaly, motor deficits, eczematous rash, autism, seizures, developmental problems, aberrant behaviour and psychiatric symptoms. [1]

According to the European guidelines on phenylketonuria, the cornerstone of PKU treatment is a low phenylalanine diet in combination with phenylalanine-free amino acid supplements. [1] NICE recommends sapropterin for treating hyperphenylalaninaemia in phenylketonuria in technology appraisal guidance. [2]

The "Prescribed Specialised Services Manual" outlines arrangements for commissioning of services for "Highly specialist metabolic disorder services". [3]

The manual states:

"NHS England and ICBs commission a number of specialist dietary products for the treatment of IMD (inherited metabolic disorders) patients with certain disorders only when initiated by the Centre and only for a 1-2-week period."

The manual also states:

"*ICBs, via GPs, are responsible for ongoing prescription of all specialist dietary products for patients with IMD, once initiated by the Centre. ICBs, via GPs, are responsible for ongoing prescription of all medications except those that are already accepted as commissioned directly by NHS England*…"

Local specialist services have indicated that they are unable to prescribe or supply any of the phenylalanine-free amino acid substitutes and these products are to be prescribed by a patient's GP. The products can be supplied by any pharmacy however many pharmacists report that they have problems trying to source the items. In the event that pharmacies are unable to obtain supply of the items, specialist services are able to set up a home delivery service in collaboration with the manufacturing companies. If this happens the companies will contact the GP directly to request the prescription on the patient's behalf after doing a stock check with the patient.

Cost and prescribing data

Prior to the request to develop this position statement, MLCSU was requested to report total prescribing for the "Phlexy" brand products prescribed for the management of PKU. In the year to February 2018 the total cost of these products was approximately £175,000.

During the development of the position statement the scope of the prescribing report was widened to include children's protein supplements and all other known brands used in the management of PKU. Across the Lancashire and South Cumbria STP area approximately 1,000 items were prescribed in the year to April 2018 at a total cost of approximately £400,000.

Updated prescribing data for the year to January 2024 shows that prescribing of dietary and vitamin products to manage PKU is roughly the same cost as in 2018 (a 4% increase to an overall spend of £611,000).

Please access this guidance via the LMMG website to ensure that the correct version is in use.

References

[1] AMJ van Wegberg et al, "The Complete European guidelines on phenylketouria: diagnosis and treatment," *Orphanet Journal of Rare Diseases,* vol. 12, no. 162, 2017.

[2] NICE, "Sapropterin for treating hyperphenylalaninaemia in phenylketonuria TA729," September 2021. [Online]. Available: https://www.nice.org.uk/guidance/ta729/chapter/1-Recommendations. [Accessed April 2024].

[3] NHS England, "Prescribed Specialised Services Manual Version 6," March 2023. [Online]. Available: https://www.england.nhs.uk/wp-content/uploads/2017/10/PRN00115-prescribed-specialised-services-manual-v6.pdf. [Accessed April 2024].

Version Control

Version Number	Date	Amendments Made	Author
1.0	July 2018	New document	PT
1.1	April 2024	Updated references and products. Reference to NICE	PT

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