Background

Glucosamine is an amino monosaccharide. The rationale for its use in osteoarthritis (OA) is that it is a precursor for glycosaminoglycans, and glycoproteins which are a major component of joint cartilage and synovial fluid. Commonly sold forms of glucosamine are glucosamine sulphate and glucosamine hydrochloride. It is available in the UK in over 50 different preparations (in strengths of 500mg, 750mg and 1500mg, as tablets, capsules and liquid formulations, and with or without chondroitin).

Evidence

Evidence to support the efficacy of glucosamine hydrochloride as a symptom modifier is poor. For the non-licensed product (glucosamine sulphate), the evidence is not strong enough to warrant recommending that it should be prescribed on the NHS. One glucosamine hydrochloride product is licensed, it would not be cost effective to prescribe glucosamine on the NHS.

Many people with osteoarthritis take over-the-counter nutriceutical products and may benefit from clear, evidence-based information. In particular, NICE recommend that it would be beneficial to advise people who wanted to trial over-the-counter glucosamine that the only potential benefits identified in early research are purely related to a reduction of pain (to some people, and to only mild or modest degree) with glucosamine sulphate 1500 mg daily.

National Guidance

NICE Guideline CG177: Osteoarthritis: care and management, states that:

1.4.5 Do not offer glucosamine or chondroitin products for the management of osteoarthritis.

Prescribing Recommendations

Hull and East Riding Prescribing Committee therefore recommends that

- Practitioners in Hull and East Yorkshire should not prescribe any glucosamine (or chondroitin) preparation.
- Patients currently being prescribed glucosamine (or chondroitin) should be reviewed in the light of NICE guidance.
- Patients with osteoarthritis should be offered accurate verbal and written information to enhance understanding of the condition and its management, and to counter misconceptions, such as that it inevitably progresses and cannot be treated. Information sharing should be an ongoing, integral part of the management plan rather than a single event at time of presentation.
- Those patients expressing a desire to try (or continue taking) glucosamine should be advised:
  - To buy it over the counter from a reputable source using a brand of glucosamine sulphate, such as Valupack
  - To use it in OA of the knee only
  - That a single daily dose of 1500mg has the most favourable evidence
  - How to perform their own trial of therapy, that is, to evaluate their pain before starting glucosamine and ensure they review the benefits of glucosamine after three months.

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1 NICE Guideline CG177: Osteoarthritis: care and management (February 2014) available at https://www.nice.org.uk/guidance/cg177