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(54) Title: MEDICAMENTS CONTAINING PANTOTHENIC ACID

(57) Abstract: A medicament and procedure is disclosed for alleviation of inflammation or pain in the region of a human or animal joint. The procedure involves injecting pantothenic acid or a derivative thereof into the vicinity of the affected joint.

MEDICAMENTS CONTAINING PANTHOTHENIC ACID

This invention relates to medicaments and their use in the alleviation of inflammation and pain in joints.

Pain or loss of movement in joints is a common occurrence, particularly among the elderly or those who have suffered damage to cartilage, bone surfaces or ligaments.

Standard methods of treatment include the administration of corticosteroids by injection into the site of the inflammation. However, relief tends to be temporary and long term use carries a number of contraindications.

Pantothenic acid (sometimes known as vitamin B5) and its salts have been used as a dietary supplement and for treatment of bronchial asthma, hay-fever, sinusitis and neurodermatitis.

It has now been found that pantothenic acid is of value in reducing inflammation when injected into the region of an affected joint.

According to the present invention there is provided use of pantothenic acid or a derivative thereof in the preparation of a medicament for administration by injection into the region of a joint for alleviation of inflammation or pain.

The pantothenic acid may be used in the form of a salt, e.g. the calcium salt. Pantothenic acid is a naturally occurring substance in plant and animal tissue. A particularly rich source is royal jelly obtainable from honey bee colonies. It may be used in its naturally occurring state or as a chemically pure material. Synthetic methods of preparations include those described in US Patent Nos. 2,780,645; 2,845,456 and 2,934,428. The free acid and its salts are optionally active and the dextro-rotatory isomer is preferred.

Conveniently, a medicament is prepared by dissolving the active ingredient, i.e. pantothenic acid or a derivative in a suitable solvent, e.g. water, and injecting the solution into the affected joint. The initial treatment may cause some pain and it may, therefore, be desirable to co-administer a local anaesthetic, e.g. lignocaine, at the same time or shortly before the injection of the pantothenic acid.

Other physiologically active materials may be co-administered, e.g. cysteine or glucosamine.

It may also be desirable to co-administer within the same treatment regime, a surface active phospholipid (SAPL) such as dipalmitoyl-phosphatidyl choline (DPPC) or phosphatidyl glycerol (PG). Preferably, a mixture of DPPC and PG is employed. A preferred protein-free SAPL composition comprising a blend of DPPC and PG is available from Britannia Pharmaceuticals Ltd of Brighton Road, Redhill under the trade mark 'Alec'. SAPL's such as 'Alec' are believed to act as a lubricant in joints, taking over to some extent the function of synovial fluid.

The medicaments of this invention may be used in the treatment of several conditions associated with inflammation or reduced movement of joints. Examples include tennis elbow, housemaid's knee, frozen shoulder, inflamed knee joints and hips and back pain associated with inflammation or restricted movement in the spinal vertebrae.

A typical dose is about 2 mls of an aqueous solution of about 500 mg of the acid salt. The medicament is injected directly into the site of the inflamed joint. A programme of injections is generally desirable in which dosages similar to that indicated above are given at intervals of a few days to about one week. Reduced

inflammation and increased freedom of movement is usually noticeable after about a week from the initial injection.

CLAIMS:-

1. Use of pantothenic acid or a derivative thereof in the preparation of a medicament for administration by injection into the region of a joint for alleviation of inflammation or pain.

2. Use according to claim 1 wherein the derivative is a salt of pantothenic acid.

3. Use according to claim 2 wherein the salt is the calcium salt.

4. Use according to any one of the preceding claims wherein the medicament comprises an aqueous solution of pantothenic acid or a derivative thereof.

5. Use according to any one of the preceding claims wherein the medicament includes a local anaesthetic.

6. Use according to any one of the preceding claims wherein the medicament is co-administered with cysteine or glucosamine.

7. Use according to any one of the preceding claims wherein the medicament is co-administered with a surface-active phospholipid (SAPL).

8. Use according to claim 7 wherein the SAPL comprises dipalmitoylphosphatidyl choline.

9. Use according to claim 7 or 8 wherein the SAPL comprises phosphatidyl glycerol.