Vitamin D Analogue

One-Alpha®

Capsules
Alfacalcidol 0.25 µg, 0.5 µg or 1 µg

Drops
Alfacalcidol 2 µg/ml (one drop provides 0.1 µg)

Injection
Alfacalcidol 2 µg/ml (for i.v. use)

Properties
Alfacalcidol (1α-hydroxyvitamin D_3) is rapidly converted in the liver to 1.25-dihydroxyvitamin D_3 , the metabolite of vitamin D which acts as a regulator of calcium and phosphate homeostasis.
Impaired endogenous production of 1.25-dihydroxyvitamin D_3 by the kidneys contributes to the disturbances in mineral metabolism found in several disorders, including renal bone disease, hypo-parathyroidism, and vitamin D-dependent rickets. These disorders require high doses of vitamin D for their correction but only small doses of One-Alpha®. As compared with Vitamin D, the main advantage of One-Alpha® is the more rapid onset and reversal of action which allows a more accurate dose titration and decreases the risk of prolonged hypercalcaemia.

Indications
Diseases caused by disturbances in the calcium metabolism in consequence of reduced endogenous production of 1.25-dihydroxyvitamin D_3.
Renal osteodystrophy, postoperative or idiopathic hypo-parathyroidism, pseudohypoparathyroidism, as an adjunct to the management of tertiary hyperparathyroidism, vitamin D-resistant rickets or osteomalacia, vitamin D-dependent rickets, neonatal hypocalcaemia or rickets, malabsorption of calcium, osteoporosis, malabsorptive and nutritional rickets, and osteomalacia.

Dosage
Initial dose:
Adults and children above 20 kg weight: 1 µg daily.
Children under 20 kg body weight: 0.05 µg/kg/day.
Neonates: 0.1 µg/kg/day.
It is important to adjust the dosage according to the biochemical responses to avoid hypercalcaemia. Indices of response include levels of serum calcium, alkaline phosphatase, parathyroid hormone, urinary calcium excretion as well as radiographic and histological investigations. Patients with marked bone disease (other than those with renal failure) may tolerate higher doses without developing hypercalcaemia. However, failure of the serum calcium to rise promptly in osteomalacic patients does not necessarily mean that a higher dose is required, since calcium from increased intestinal calcium absorption may be incorporated into demineralized bone.
Most patients will respond to doses between 1 and 3 µg daily.
The dose requirements generally decrease in patients with bone disease when there is biochemical or radiographic evidence of bone healing and in hypoparathyroid patients after normal serum calcium levels have been obtained. Maintenance doses are generally in the range of 0.25–2 µg daily.
One-Alpha® can be given as an i.v. injection following each haemodialysis. The injection should be administered into the return line from the haemodialysis machine at the end of each dialysis. The initial dosage for adults is 1 µg per dialysis. The maximum dose recommended is 6 µg per dialysis and not more than 12 µg per week.
Shake the ampoules well before use.
Patients currently taking barbiturates or other anticonvulsants may need larger doses of One-Alpha® to produce the desired effect.

Precautions
Throughout the treatment with One-Alpha®, regular serum calcium determinations are essential. Indeed, One-Alpha® should be used only when adequate facilities are available for monitoring the serum calcium level and other appropriate biochemical parameters on a regular basis.
Frequency of monitoring: Plasma calcium levels should be measured at weekly to monthly intervals depending on the progress of the patient. Frequent estimations are necessary in the early stages of treatment (particularly when the plasma calcium is already relatively high) and later when there is evidence of bone healing. Plasma calcium levels should also be estimated regularly during the initial treatment of disorders without significant bone involvement, e.g. hypoparathyroidism.
If hypercalcaemia occurs, One-Alpha® medication should be stopped immediately until serum calcium levels return to normal (in about one week) and then resumed at half the previous dose. The risk of hypercalcaemia depends on factors such as the degree of any mineralization defect, renal function, and the dose of One-Alpha®. Hypercalcaemia will occur if the dose of One-Alpha® is not reduced appropriately when there is biochemical evidence of bone healing (e.g. return towards normal in the level of plasma alkaline phosphatase). Prolonged hypercalcaemia should be avoided, particularly in chronic renal failure.

In patients with renal bone disease, One-Alpha® should be given in combination with a phosphate-binding agent to prevent hyperphosphataemia which is known to increase the risk of metastatic calcification.
One-Alpha® injection should be avoided in patients with known sensitivity to injections containing propylene glycol and used with caution in small premature infants.

Pregnancy
One-Alpha® should only be used in pregnancy and during lactation if considered essential by the physician.

Side-effects
Apart from hypercalcaemia, no other side-effects have been reported.

Overdosage
Hypercalcaemia is treated by stopping treatment with One-Alpha®. Severe hypercalcaemia may require additional treatment with a "loop" diuretic, intravenous fluids and corticosteroids.

Storage condition
Capsules: 15°C-25°C.
Drops, Injection: 2°C-8°C.

Date of Last Revision of the Package Insert Leaflet:
February 2008

LEO Pharmaceutical Products
Ballerup – Denmark

THIS IS A MEDICAMENT
– Medicament is a product, but not like other products.
– Medicament is a product which affects your health, and its consumption contrary to instructions is dangerous for you.
– Follow strictly the doctor's prescription, the method of use and the instructions of the pharmacist who sold you the medicament. The doctor and pharmacist are experts in medicaments, their benefits and their risks.
– Do not by yourself interrupt the period of treatment prescribed to you.
– Do not repeat the same medicament and do not increase doses without consulting your Doctor.

Do not leave medicaments within reach of children

Council of Arab Health Ministers
Union of Arab Pharmacists.