COSMOS : A picture of CKD-MBD in the European Scenario

COSMOS (Current Management Of Secondary Hyperparathyroidism – a Multicentre Observational Study) is a study aiming to survey the bone mineral disturbances in hemodialysis population and the current clinical practice in Europe for the prevention, diagnosis and treatment of secondary hyperparathyroidism in hemodialysis patients.

The study design consists of a multicenter, open prospective cohort study collecting clinical parameters and outcome data from originally 5900 dialysis subjects from 295 dialysis centres in Europe in 21 countries.

This study is entirely noninterventional/observational and does not alter clinical management of subjects. Furthermore, all data are collected from medical records and does not require subject contact. The study will run for a duration of 3 years. Per individual subject enrolled data are recorded and collected every 6 months in a unique database regarding normal clinical practice, including markers of bone/mineral metabolism, treatment variables and clinical outcome data (presence of co-specific mortality, CV-disease and/or bone disease, fractures, calcification, vascular access procedures). At the 6-month observation, markers of bone/mineral metabolism that have occurred over the previous 6-month period will be recorded. Moreover, center-specific data are collected through a web-based data-base software.

Patient recruitment started in February 2005 and finished in July 2007. Patients recruited over this period of time were 4500 from 245 sites in 20 European countries. Approximately 80% of sites have already completed 2 years of follow-up, whereas almost 1/3 of sites have already completed the 3 years of follow-up.

The first preliminary data from COSMOS, based on 50% of the expected COSMOS study population, were presented for the first time at the ERA-EDTA Annual Meeting in Glasgow, July 2006 in a specific Symposium and also in three posters summarizing baseline COSMOS data. Initial evaluation of the baseline patient characteristics based on 50% of the expected COSMOS study population gives a useful initial insight into a broad dialysis population. There appears to be significant patient differences in BMI, Hb and serum albumin, biochemical parameters (serum Ca, Ca x P and iPTH) and incidence of parathyroidectomy, cardiovascular disease and calcification depending on time on dialysis. Most participating facilities follow specific practice guidelines; 63% of sites follow KDOQI™, 19% follow EBPG and 9% of sites follow national guidelines, however, the achievement of targets set out by KDOQI™ is far from optimal; only 9% of patients are within K/DOQI targets for all four bone parameters simultaneously (Ca, P, CaxP and PTH). The type of guideline being followed does not appear to affect patient bone mineral levels.

The first data on overall/cardiovascular mortality/hospitalization rate were presented at the ERA-EDTA Meeting in Barcelona, June 21st-24th, in a specific Symposium and in an Oral Free Communication. Data from 2495 patients that were followed up for 18 months were presented. Patients not achieving some of the classic bone and mineral K/DOQI targets (especially Ca above the target) showed an increased risk of mortality and hospitalization (All cause and cardiovascular-related).