4th INTERNATIONAL WORKSHOP ON PHOSPHATE AND OTHER MINERALS

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TYPE ABSTRACT HERE :

TREATMENT OF HYPOPHOSPHATEMIC TUMOR OSTEOMALACIA AND OF HYPERPHOSPHATEMIC TUMORAL CALCINOSIS

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Benign tumors described as fibrosing hemangiopericytomas may be associated with hypophosphatemic osteomalacia. We describe a follow-up of the patient reported by Glanville and Bloom (Brit Med J 2:26-29, 1965) who had renal glycosuria, hypophosphatemic osteomalacia and 2 parathyroid adenomas. A 3rd parathyroid adenoma was resected in 1974. In 1978, having received no antiricketic therapy for 9 mo, resection of a long-standing but previously unrecognized hemangiopericytoma during a metabolic balance study was associated with resolution of both glycosuria and hypophosphaemia. Results suggested that an unidentified humoral agent can produce phosphaturia, glycosuria and parathyroid adenomas in man. The tumor is currently maintained in tissue culture.

Prior to surgery fresh plasma from this patient was transfused into an 11-year old boy with idiopathic hyperphosphatemia (plasma P 10 mg/dl) and tumoral calcinosis. Plasma phosphorus in this second patient did not change and further treatment of hyperphosphataemia was attempted. Synthetic human (N 1-34) parathyroid hormone produced a rise in plasma calcium, phosphorus and urinary hydroxyproline suggesting that the disease results from isolated resistance to the phosphaturic effect of PTH. Phosphate depletion by aluminium hydroxide gel was associated with marked hypercalciuria at elevated plasma P levels suggesting that sensitivity of renal 25-OH D 1-hydroxylase to prevailing phosphate levels may be altered. Daily Calcitonin injections produced transient phosphaturia which became refractory although plasma calcium and phosphorus response was maintained. If this defective phosphaturic response to PTH is truly isolated (i.e. separate from the calcium and vitamin D 1-hydroxylase effects) then the results of this "experiment of nature" (i.e. hyperphosphataemia and tumoral calcinosis) may conceivably illustrate the true value of the phosphaturic element of PTH activity, which is thought to have evolved during migration of life to a phosphate-rich terrestial existence.

CHECK LIST

1. Titles should be brief and in caps, clearly indicating the nature of the investigation. Then state author's names (underline presentor's name ONLY), institutional affiliation and city and state (all in lower case).

2. Use of standard abbreviations is desirable. Use Kg., Gm., mg., ml., L. (liter), mEq., M.(meter), mOsm(milliosmols),/(per), and%. Place special or unusual abbreviations in parentheses after the full word, the first time it appears.

3. Organize the body of the abstract into one paragraph as follows :

a. A statement of the purpose of the study.

b. A statement of the methods used.

c. A summary of the results presented in sufficient detail to support the conclusions.

d. A statement of the conclusions reached.

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Please mail abstracts to :

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FEBRUARY 2, 1979