Octreotide for the Treatment of Hypercalcemia Related to B Cell Lymphoma

R.	Raffaele	Pezzilli
P.	Paola	Bttili
B.	Bahjat	Barakat
P.	Pierluigi	Broccoli

Emergency Department, Sant'Orsola Hospital, Bologna, Italy

Raffaele Pezzilli, MD, Medicina d'Urgenza e Pronto Soccorso, Ospedale Sant'Orsola, Via Massarenti 9, I-40138 Bologna (Italy)

10 9

; Steroids:

Fluids + Furosemide + Diphosphonates

Dear Sir,

Severe hypercalcemia represents a life-threatening emergency and its management is still difficult. Patients with malignancies who develop hypercalcemia generally have a poor outcome [1]. The fluids, diuretics, steroids, diphosphonates, are the most common therapeutic options. We report the case of a patient with hypercalcemia related to B cell lymphoma in whom all the above-mentioned therapeutic measures failed to decrease serum calcium level. It was then normalized by the use of the long-acting somatostatin analogue octreotide.

A 76-year-old woman with peripheral large-cell type B lymphoma [3] was admitted to our emergency department with coma and jaundice. Blood examinations revealed severe hypercalcemia (serum calcium 4.3 mmol/l; normal values 2.1-2.8), hypophosphatemia and hemolytic anemia. Plasma PTH was undetectable (< 10 pg/ml, normal range 10-70 pg/ml). The administration of large amounts of fluids (6,000 ml/day), furo-semide, steroids and diphosphonates at the optimal doses currently suggested was started intravenously; anemia was corrected with blood transfusions. In the following 24 h, no significant changes in consciousness and serum calcium levels (4.1 mmol/l) were observed. Calcitonin (Calcitonina, Sandoz Prodotti Farmaceutici, Milan, Italy) at the dose of 24 IU/kg/24 h was added intravenously (fig. 1) and on the 4th day following admission, for persistent hypercalcemia

Octreotide

2 7

Hemodialysis

„ 6 -

|Octreotide|

3 -

2-

|||||

Days

Fig. 1. Daily serum calcium determination. The horizontal solid line represents the upper normal limit.

days, serum calcium level progressively returned to levels within the normal range, and the patient became conscious. Nine days after the treatment was started, octreotide was stopped. Five days thereafter, serum calcium levels were again increased (over the upper normal limit; (2.9 mg/dl) and the administration of octreotide, at the same dose pre- (4.8 mmol/l), hemodialysis was carried out without any improvement in the electrolyte alteration (serum calcium concentration: 4.4 mmol/l). On the 5th day from admission, calcitonin was stopped, and octreotide (San-dostatina, Sandoz Prodotti Farmaceutici), at a dose of 0.1 mg ter in die subcutaneously, was added to the therapy. In the following

KAHGEH

E-Mail karger@karger.ch Fax+ 41 61 306 12 34 <http://www.karger.ch>

© 1997 S. Karger AG, Basel 0030-2414/97/0546-0517\$ 15.00/0

This article is also accessible online at: [http:// BioMedNet .com / karger](http://BioMedNet.com/karger)

viously described, was newly started leading to the normalization of serum calcium concentration (fig. 1). The patient died because of infective complications of the disease 32 days after admission.

It has been reported that hematological malignancies may produce PTH-like substances determining hypercalcemia [4], which could be detected in about 15 % of the patients with non-Hodgkin lymphoma [5].

Octreotide, a potent long-acting somatostatin analogue that suppresses the action of various hormones, probably determined a block of the action of PTH-like substances released by the tumor, causing a decrease in

serum calcium level. The efficacy of octreotide in the treatment of hypercalcemia was confirmed by the fact that when hypercalcemia reappeared the drug was once more effective to decrease serum calcium level.

As far as we know, this is the first reported case of a patient with hypercalcemia related to B cell lymphoma in whom treatment with octreotide had beneficial effects on electrolyte alteration.

Octreotide may represent a new therapeutic option in the treatment of patients with hypercalcemia in whom this condition may be due to the release of PTH-like peptides.

References

Edelson GW, Kleerekoper M: Hypercalcemic crisis. *Med Clin North Am* 1995;79:79-92.

Kovacs CS, MacDonald SM, Chick CL, Bruera E: Hypercalcemia of malignancy in the palliative care patient: A treatment strategy. *J Pain Symptom Manage* 1995;10:224-232.

Harris NL, Jaffe E, Stein H, et al: A revised European-American classification of lymphoid neoplasms: A proposal from the International Lymphoma Study Group. *Blood* 1994; 84: 1361-1392.

Ikeda K, Ohno H, Hane M, et al: Development of a sensitive two-site immunoradiometric assay for parathyroid hormone-related peptide: Evidence for elevated levels in plasma from patients

with adult T-cell leukemia/lymphoma and B-cell lymphoma. J Clin Endocrinol Metab 1994;79:1322-1327.

Goni MH, Tolis G: Hypercalcemia of cancer: An update. Anticancer Res 1993;! 155-1160.

518

Oncology 1997;54:517-518

Pezzilli/Billi/Barakat/Broccoli