Correspondence

Accepted after revision: March 2, 1992

Acta Haematol 1992;88:55-56

Acute Bilateral Parotitis during Chemotherapy for Acute Lymphoblastic Leukemia

J.E.	John E.	Humphries
J.T.	Thomas	Lee

Charlottesville

John E. Humphries, MD, Department of Pathology, Box 214, University of Virginia Health Sciences Center, Charlottesville, VA 22908 (USA)

Shpilberg et al. [1] recently presented a 62-year-old man who developed recurrent bilateral parotitis during chemotherapy for acute myelogenous leukemia. The development of parotitis was attributed to the chemotherapy, which consisted of cytarabine and daunorubicin. We observed a similar phenomenon during the treatment of a young man with acute lymphoblastic leukemia.

A 23-year-old male with acute lymphoblastic leukemia was admitted for chemotherapy and placement of an Ommaya reservoir. He received 10 days of L-asparaginase (500 IU/kg/day) with prednisone (100 mg p.o. per day for 7 days). On the 9th hospital day an Ommaya reservoir was placed without incident. Because of the presence of lymphoblasts on the peripheral blood smear, cytarabine (100 mg/m² by continuous infusion for 7 days) and daunorubicin (45 mg/m² i.v. for 3 days) were begun on the 11th hospital day. Methotrexate (12 mg) was administered through the reservoir on the 14th hospital day. On the 6th day of cytarabine (hospital day 18) the patient noted the acute onset of pain, tenderness and swelling in the parotid region bilaterally. Apart from bilateral parotid swelling, examination of the head, ears, nose and throat was unremarkable. The results of serum amylase determination are shown in figure 1. A serum lipase was normal (5 IU/dl; normal range 4-24 IU/dl), suggesting that the parotid glands rather than the pancreas were the source of the dramatic rise in serum amylase. Cytarabine infusion was completed the next day and within 2 days the swelling and discomfort had spontaneously resolved.

Cyclocytidine, a chemotherapeutic agent which must first be converted in vivo to cytarabine to become active, induces parotid pain and sialorrhea [2]. These adverse effects appear to be primarily mediated through action on

1000

L-asparaginase

800

Cytarabine

Fig. 1. Serum amylase levels during hospitalization. Normal range for serum amylase: 20-110 U/l. Also shown is the timing of chemotherapy administration, Ommaya reservoir placement and duration of clinical symptoms.

D

$\Phi_{ro} > .E <$

E

3

$< D$

600

400

200

9/26

β -adrenergic receptors [3] and can be greatly diminished by the administration of β -blocking drugs such as propranolol [4].

The report by Shpilberg et al. [1] appears to be the first report of parotitis related to cytarabine chemotherapy.

We now report a second similar case. Given what is known about cyclocytidine and the parotid gland and the similarities between cyclocytidine and cytarabine, perhaps it should be surprising that parotitis is not observed more frequently.

References

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