Bilateral Submandibular Salivary Gland Enlargement during Chemotherapy for Acute Myeloid Leukaemia – Beneficial Effect of Propranolol

S.		Dabadghao
A.		Srivastava
D.		Dennison

Department of Haematology, Christian Medical College Hospital, Vellore, India

Dr. David Dennison, MD, Associate Professor, Department of Haematology, Christian Medical College Hospital, Vellore, (Tamilnadu) 632 004 (India)

Parotid gland enlargement has been described during daunorubicin-cytosine therapy for acute leukaemia [1,2]. We encountered painful bilateral submandibular salivary gland enlargement in the course of therapy for acute myeloid leukaemia and noted a beneficial response with propranolol.

A 38-year-old female was diagnosed as having acute myeloid leukaemia (FAB-M2) and was given standard induction therapy using daunorubicin (45 mg/m², day 1-3) and cytosine arabinoside (200 mg/m², day 1-7). On the 3rd day of therapy she developed unilateral swelling and pain in the submandibular region which over the next few hours became bilateral (fig. 1). Local examination of the ears, nose and throat was normal. Propranolol was started immediately at a dose of 20 mg three times a day and within 24 h she experienced a marked relief from pain. The glandular swelling took 96 h to subside completely.

Cytosine arabinoside has been implicated in inducing parotid gland swelling and pain because a prodrug, cyclo-cytidine, which in vivo is converted into the active drug cytosine arabinoside, has been shown to have β -sympa-thomimetic activity and has been shown to induce parotid pain and swelling. This can be treated with propranolol [3]. Awareness of this rare side effect can prevent the needless use of antibiotics and symptomatic relief can be achieved by the prompt use of propranolol.

Fig. 1. Bilateral enlargement of the submandibular salivary glands.

References 1 Shpilberg O, Ra'anani P, Ben-Bassat I, Ramot

B: Recurrent bilateral parotitis in acute myeloid leukemia. Acta Haematol 1991;86:56.

Humphries JE, Lee JT: Acute bilateral parotitis during chemotherapy for acute lymphoblastic leukemia. Acta Haematol 1992;88:55-56.

Schneyer CA, Galbraith WM: Inhibition of cy-clocytidine-induced enlargement of parotid and heart by propranolol or sympathetomy. Proc Soc Exp Biol Med 1975;150:394-400.