Prospective study of radiotherapy of salivary glands as treatment of sialorrhea in patients with amyotrophic lateral sclerosis

Avi Assouline, MD1, Bacem Belghith, MD2, Maya Abdelnour-Mallet, PharmD3, Sylvie Delanian, MD, PhD1,4, Timothée Lenglet, MD3 Gaëlle Bruneteau, MD3, François Salachas, MD3, Nadine Le Forestier, MD3, Pierre-François Pradat, MD, PhD3

1Service d’Oncologie - Radiothérapie, Centre Clinique de la Porte de Saint Cloud, Boulogne-Billancourt, France
2Service de Radiothérapie, Institut Salah Azaiez, Tunis, Tunisia
3Département des maladies du Système Nerveux – Groupe Hospitalier Pitié-Salpêtrière, AP-HP, Paris, France
4Service d’Oncologie - Radiothérapie, Hôpital Saint Louis, AP-HP, Paris, France

RESULTS

32 complete responses (SSS 1, 2) and 8 partial responses (SSS 3, 4, 5) were observed at the end of treatment. Follow-up at one month and 3 months showed a complete response in 16 and 11 patients respectively and a partial response in 16 and 5 patients. Treatment was well tolerated. Acute toxicity was observed in 15 patients: xerostomia in 3 patients, taste modification in 5 patients, pharyngeal pain in 4 patients and thick saliva in 3 patients. All side effects resolved in the days following the end of treatment. Seven patients treated at dose of 10 Gy relapsed and had a second radiotherapy at the same dose with good results.

DISCUSSION

Radiotherapy allowed a dramatic decrease or resolution of sialorrhea. Inter-individual variability explains the relapse in some patients and the dose of 10 Gy is probably not sufficient to maintain a long response. Treatment is well tolerated and toxicity is low with both doses of 10 and 20 Gy. Side effects are transitory even in patients who have a second radiotherapy.

BACKGROUND

Sialorrhea is a frequent and disabling symptom in patients with amyotrophic lateral sclerosis (ALS). Medical treatment is often poorly effective and/or not well-tolerated. Radiotherapy of salivary glands can be an interesting therapeutic option [1,2].

OBJECTIVE

Estimate efficiency and tolerance of radiotherapy of salivary glands in patients with ALS.

METHODS

Prospective monocentric study in ALS patients with sialorrhea treated by radiotherapy in the Clinique De La Porte De Saint Cloud (Boulogne-Billancourt, France). Preliminary results of 40 patients treated between November 2010 and November 2011 are presented. All patients had conformational radiotherapy. Total dose was 10 Gy in 2 fractions on 3 days in 27 patients and 20 Gy in 4 fractions on 10 days in 13 patients. We used two 6 MV photon opposed beams and radiation volume including both submaxillary glands and the two thirds of both parotid glands. Patients had clinical examination at the end of treatment, one month and three months later. Efficiency of radiotherapy was evaluated with the 9-grades Sialorrhea Scoring Scale (SSS).

REFERENCES