Orbital and infratemporal fossa metastasis: An unusual initial presentation of adenocarcinoma of lung

Tamojit Chaudhuri, Kamlesh Yadava[1]

Departments of Radiotherapy, [1]Pathology, Sanjay Gandhi Postgraduate Institute of Medical Sciences, Lucknow, Uttar Pradesh, India

Address for correspondence :
Dr. Tamojit Chaudhuri,
Department of Radiotherapy,
Sanjay Gandhi Postgraduate Institute of Medical Sciences,
Lucknow, Uttar Pradesh, India.
E-mail: tamojit.cnmc@gmail.com

ABSTRACT

Orbital metastasis as initial presentation of adenocarcinoma of lung is an extremely rare phenomenon. Here, we report a 46-year-old non-smoker Asian woman, who presented with right eye proptosis due to right orbital and infratemporal fossa metastasis, as the first presentation of adenocarcinoma of right lung.

Key words: *Adenocarcinoma lung, chemotherapy, orbital metastasis, radiotherapy*

CASE REPORT

Orbital and infratemporal fossa (ITF) metastasis as initial presentation of adenocarcinoma of lung is extremely rare. We report a 46-year-old Asian woman, who presented with right eye proptosis and diffuse swelling over right cheek [Figure 1]. She had no other complaints or abnormal findings on clinical examination. A contrast enhanced computed tomographic (CECT) scan of face and neck revealed a solid mass in the right orbit with extension to the ITF [Figure 2]. Histopathologic examination of the biopsy from the mass showed poorly differentiated metastatic adenocarcinoma [Figure 3], which was thyroid transcription factor 1-positive [Figure 4]. A total-body CECT scan revealed a large heterogeneously enhancing mass lesion in the upper and middle lobe of the right lung [Figure 5]. CT guided biopsy from the lung mass revealed poorly differentiated adenocarcinoma [Figure 6]. No other metastases were detected. Therefore, she was diagnosed as a case of metastatic lung adenocarcinoma (T3N0M1, stage IV), and planned for palliative chemotherapy with pemetrexed (500 mg/m^2) plus carboplatin (AUC = 5), iv on Day 1, every 3 weekly. She received 30 Gray/15 fraction palliative radiotherapy to the orbital mass. One month after completion of radiation, there was complete reduction of proptosis [Figure 7]. But, CECT thorax, done after 3 cycles of chemotherapy, revealed clear progression of the primary lung mass. The patient died 5 weeks later as a result of respiratory failure.

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Figure 1: Initial presentation with right eye proptosis and right cheek swelling

Figure 2: CECT scan of face and neck showing a solid mass in the right orbit with extension to the ITF

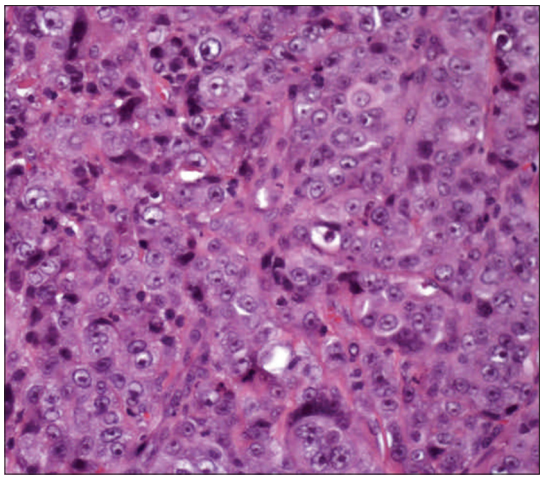

Figure 3: Histopathologic study of the orbital mass showing proliferation of adenocarcinoma cells (H and E, ×400)

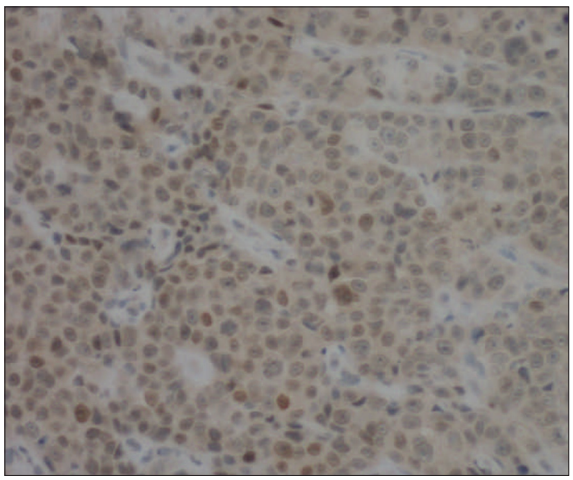

Figure 4: The tumor cells were positive for thyroid transcription factor 1 (×400)

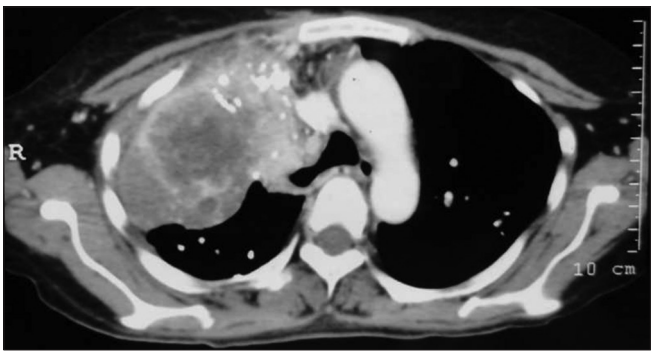

Figure 5: CECT scan of thorax showing large heterogeneously enhancing mass lesion in the upper and middle lobe of the right lung

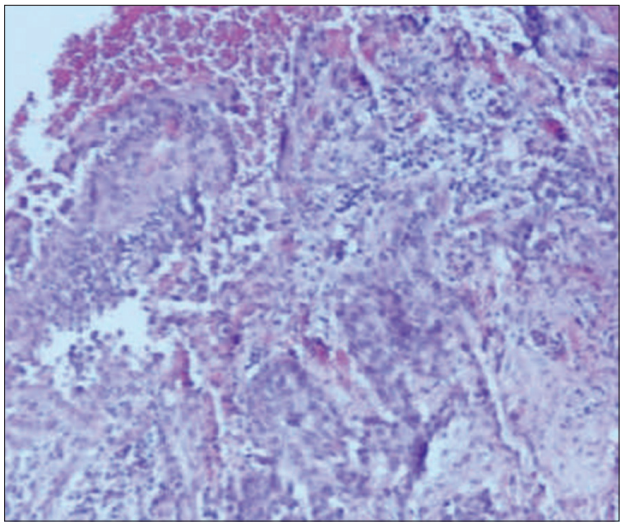

Figure 6: Histopathologic study of the CT guided biopsy from the lung mass, showing poorly differentiated adenocarcinoma (H and E, ×100)

Figure 7: One month post radiation, complete reduction of right eye proptosis

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