

Cutaneous Involvement of Systemic Anaplastic Lymphoma Kinase-Positive Anaplastic Large Cell Lymphoma

A 20-year-old female presented with a 2-month history of progressively increasing ulceroproliferative growth over the back [Figure 1] along with multiple subcutaneous nodules. Physical examination revealed a large ulceroproliferative growth (15 cm × 15 cm) over the back. Baseline positron emission tomography-computed tomography (PET-CT) showed bulky FDG avid (SUV_{max} - 6.41) mass in the right lower back region with supradiaphragmatic adenopathy along with hypermetabolic nodular deposits in the anterior abdominal wall, right posterior chest walls, right elbow region, and paravertebral regions [Figure 2].

What Is the Diagnosis?

Answer

Anaplastic lymphoma kinase (ALK)-positive anaplastic large cell lymphoma (ALCL).



Figure 1: Ulceroproliferative growth over the back

H and E staining shows atypical lymphoid cells arranged in sheets with interspersed scattered histiocytes. The tumor cells display hyperchromatic round nuclei with moderate amount of eosinophilic cytoplasm. On immunohistochemistry, tumor cells are positive for CD45. Ki67 labeling index is approximately 80%. CD3 positivity is seen in the background reactive cells. Tumor cells are ALK-1 positive. CD20 is negative in the tumor cells [Figure 3a-f]. She was treated with ALCL-99 protocol, and after four cycles of chemotherapy, PET-CT showed significant metabolic and morphologic remission on the primary site along with complete metabolic and morphologic remission in all other sites. No visible growth over previous diseases site was noted [Figure 4]. Our case highlights a huge cutaneous involvement of systemic ALCL and dramatic response with ALCL-99 protocol.

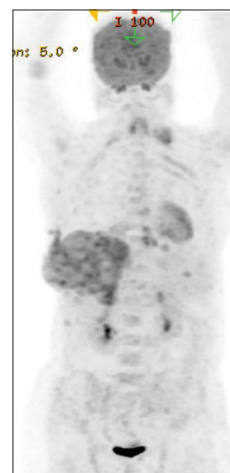


Figure 2: Positron emission tomography-computed tomography showing bulky FDG avid (SUV_{max} - 6.41) mass in the right lower back region with supradiaphragmatic adenopathy along with hypermetabolic nodular deposits in the anterior abdominal wall, right posterior chest walls, right elbow region, and paravertebral regions

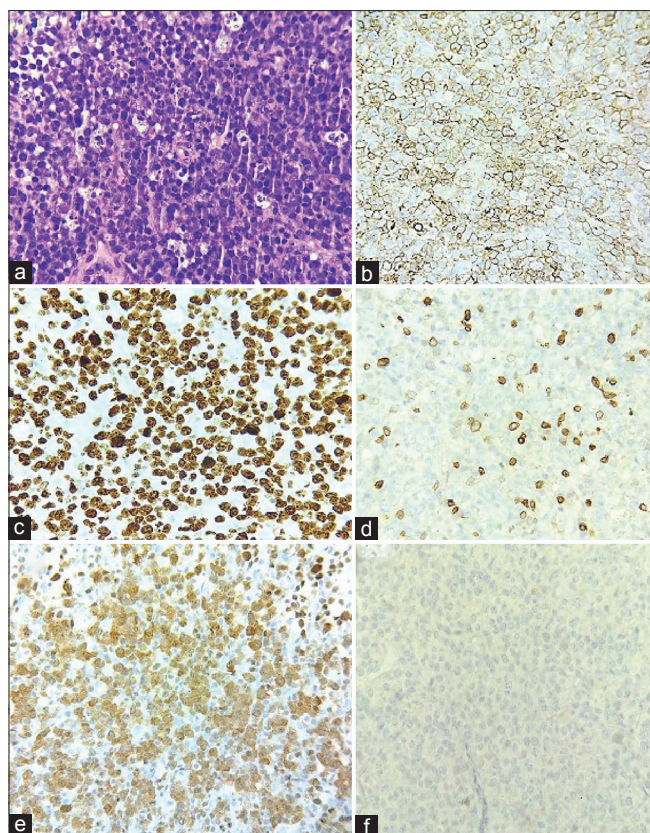


Figure 3: (a) H and E staining: Section showing atypical lymphoid cells arranged in sheets with interspersed scattered histiocytes. The tumor cells display hyperchromatic round nuclei with moderate amount of eosinophilic cytoplasm. (b) On immunohistochemistry, tumor cells are positive for CD45. (c) Ki67 labeling index is approximately 80%. (d) CD3 positivity is seen in the background reactive cells. (e) Tumor cells are anaplastic lymphoma kinase-1 positive. (f) CD20 is negative in the tumor cells

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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Nil.

Conflicts of interest

There are no conflicts of interest.



Figure 4: No visible growth over previous diseases site

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