A case of cutaneous peripheral T-cell Lymphoma not otherwise specified (PTCL-NOS), successfully treated with Brentuximab Vedotin after disease progression on standard chemotherapy

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Cutaneous PTCL-NOS is a rare and aggressive variant of cutaneous T-cell lymphoma with unfavourable prognosis. First line treatment includes anthracycline based regimens. However, the disease tends to be refractory to chemotherapy and patients relapse very quickly.

We present a case of cutaneous PTCL-NOS, follicular T-helper phenotype, CD30+, successfully treated with Brentuximab Vedotin after rapid progression under two standard chemotherapy regimens and TSEBT.

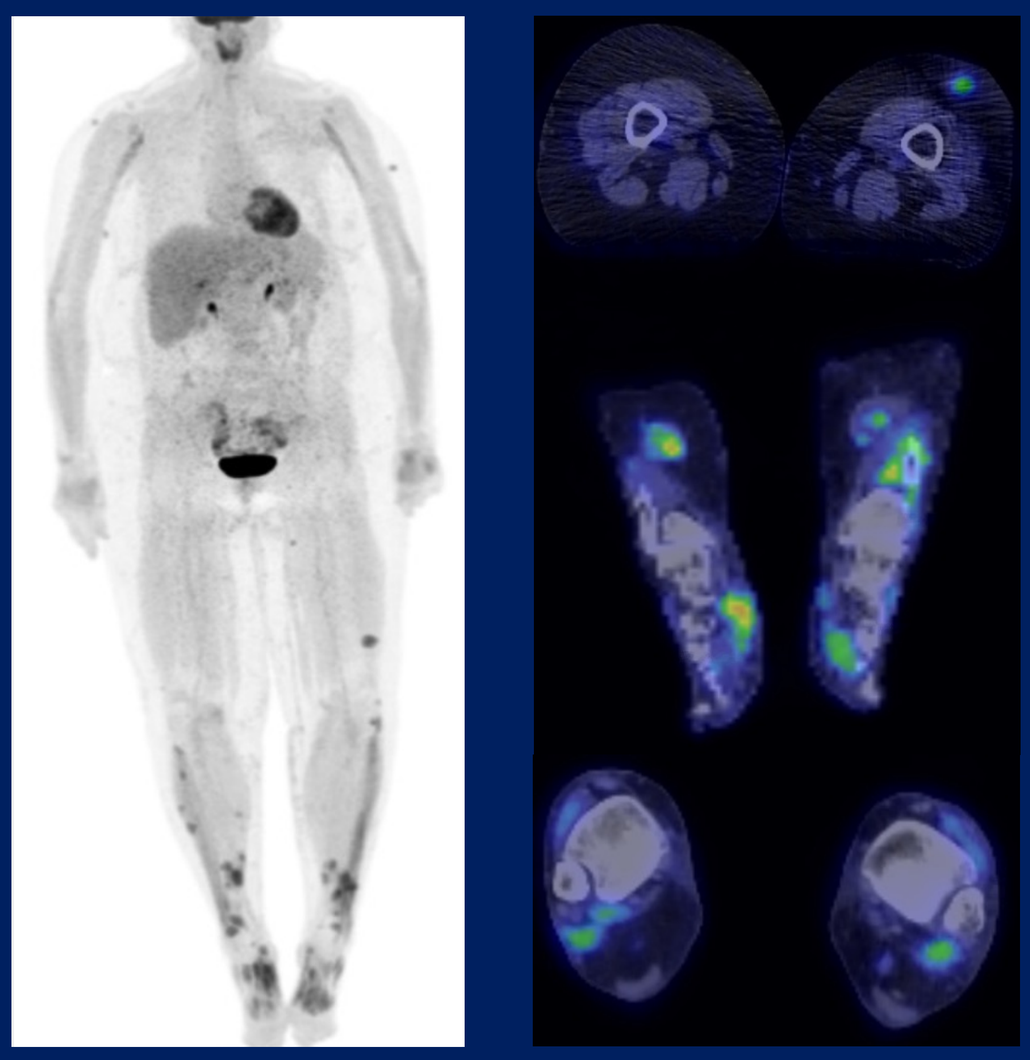

Figure 1: May 2020 whole body PET /CT showing metabolically active disease (left) with details of thighs, legs and ankle involvement (right).

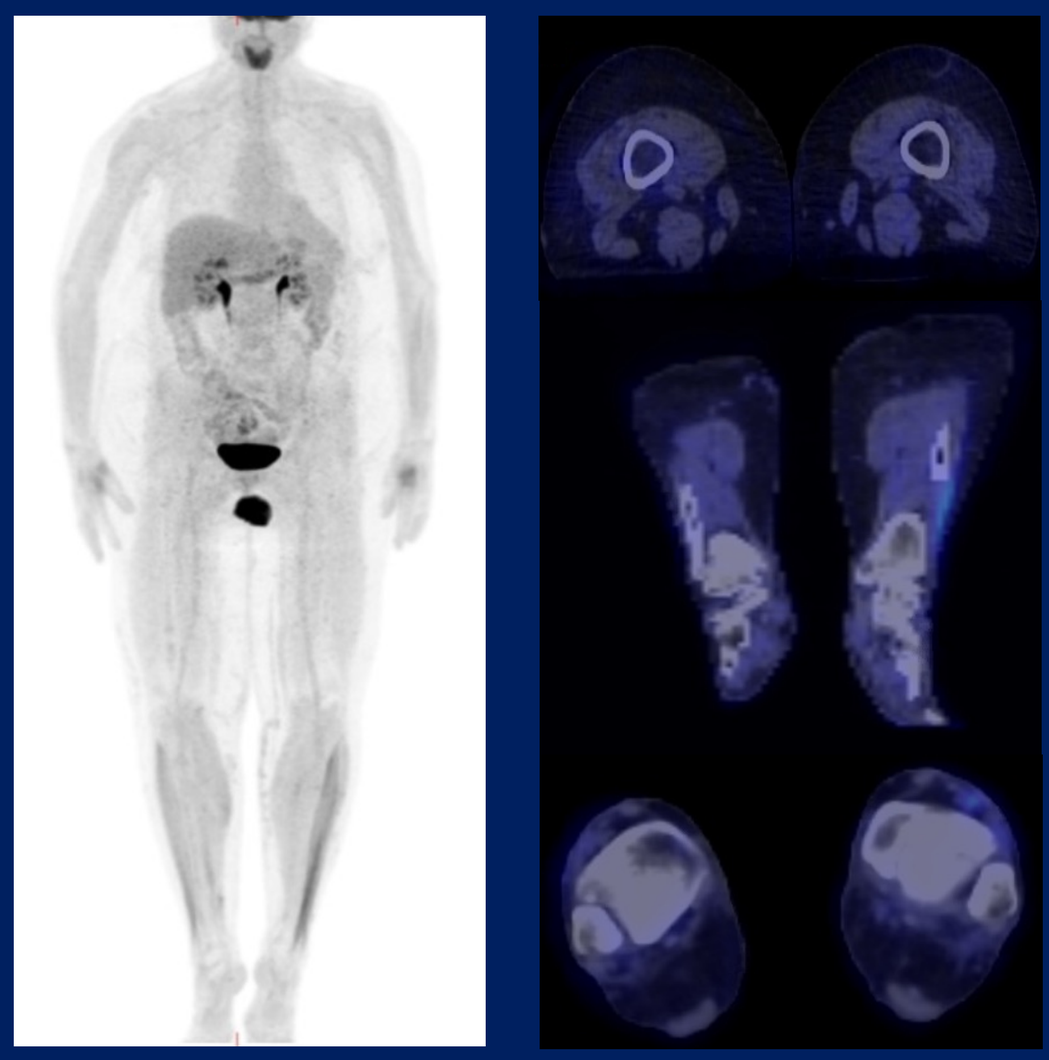

Figure 2: Sep 2021 whole body PET/CT showing maintained complete response after 15 cycles of Brentuximab Vedotin.

A 71 y old female patient diagnosed with PTCL NOS presented in May 2020 with metabolically active subcutaneous nodules throughout the body, with muscle involvement in both legs.

Previous treatments included TSEBT and 2 lines of chemotherapy including CHOP, with progressive multiple focal lesions following cycle 4. The treatment was switched to GCVP – 4 cycles completed in August 2020 - after which she had further progression.

The only available treatment options were either gemcitabine/oxaliplatin containing chemotherapy or CEPP regimen (cyclophosphamide, etoposide, procarbazine, prednisolone). Both treatments had a low chance to be beneficial, considering the rapid progression on the previous two chemotherapy lines.

On previous skin biopsies, the disease showed CD30 positivity (more than 30%). We considered treatment with Brentuximab Vedotin, which we obtained as compassionate use supply.

We started treatment in September 2020 and a restaging PET/CT showed partial response after cycle 4 and complete metabolic response after cycle 8. The patient received a total of 15 cycles and had maintained complete response in September 2021.

The treatment tolerance was excellent with only G1-G2 peripheral neuropathy. There was one episode of G3 peripheral neuropathy post cycle 10, which improved back to G1 after giving 2-week treatment break.

PTCL NOS is characterised by poor overall survival (20-30% at 5 years) and rapid progression. The treatment with Brentuximab Vedotin has proven to be safe and effective in our patient, with maintained complete response at 12 months after treatment initiation.