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Cutaneous extra nodal lymphoma relapse: A case report and review of literature

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ABSTRACT

INTRODUCTION: Cutaneous lymphomas represent a unique group of lymphomas. Cutaneous lymphomas are the second most frequent extra nodal involvement; gastrointestinal involvement being the most frequent (Malkan et al. [1]).

To the best of our knowledge few cases of cutaneous relapse of Non-Hodgkin Lymphoma (NHL) have been reported where there was an absence of primary cutaneous involvement.

CASE PRESENTATION: A case study of a 70-year-old woman who was referred for an excisional biopsy of a lesion on her left cheek in 2017.

She had previously been diagnosed with NHL in 2009; disease involved the right groin lymph nodes. The patient completed a course of chemotherapy and was in remission.

An excision of the lesion on the left upper cheek confirmed low-grade follicular lymphoma. A PET scan was performed after the histology from the lesion was confirmed which demonstrated moderate fluorodeoxyglucose (FDG) uptake in left cheek, left external iliac lymph nodes and left tonsil consistent with recurrence of lymphoma.

DISCUSSION: The majority of relapses of NHL occur in the first 2 years after the completion of treatment. Extra nodal lymphomas comprise 24–48 percent of cases. The reason for multifocal extra nodal lymphoma or preferential involvement of specific extra nodal sites at recurrence is not clear

Extra nodal involvement involving skin accounts for 10 percent of cases.

NHL typically relapses in the same involvement sites.

First line treatment for solitary lesions includes surgical excision, antibiotics and radiotherapy.

CONCLUSION: Disease relapse was not present in the primary involvement site. Furthermore, there was a cutaneous relapse where there was no primary cutaneous disease. Treatment involved systemic therapy for this patient given the nodal involvement found on the PET scan.

1. Introduction

Cutaneous lymphomas are the second most frequent site of extra nodal involvement after gastrointestinal sites [1].

The majority of relapses occur within the first two years after completion of treatment. Relapses are frequently symptomatic and rarely is identification made on the basis of routine imaging alone [1].

Skin involvement can be primary or secondary.

In this study we aim to report on a case of cutaneous relapse of NHL with no primary cutaneous involvement.

This case has been reported in line with the SCARE criteria [2].

2. Case presentation

This case study details a 70-year-old woman who was referred for an excisional biopsy of a lesion on her left cheek in September 2017.

She had previously been diagnosed with NHL in 2009. Disease involving the right inguinal lymph nodes was found. The patient completed chemotherapy and was in remission.

The histology at the time from the excised right inguinal lymph node measuring $14 \times 10 \times 7$ mm was consistent with follicular lymphoma grade 2/3 with infiltrate extending into the node capsule and surrounding fat. Immunoperoxidase staining confirmed CD20-positive B cells which expressed CD10 and bcl-2.

The subcutaneous lesion on the left cheek was mobile and measured 10 mm × 10 mm. It had been present for 6 months and was consistent with appearances of a sebaceous cyst. There was no change in appearance over the preceding 6 months. Furthermore, there was no associated pain or any other palpable nodes or masses

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on exam. An ultrasound scan of the lesion arranged prior to the patients' referral to our clinic a month prior demonstrated a hypoechoic mixed echogenicity vascular lesion in subcutaneous tissue with surrounding hyperemia.

The morphology and immunoprofile of the excised lesion on the left upper cheek was in keeping with low-grade follicular lymphoma. Sections sent to pathology demonstrated an irregular nodular/follicular lymphoid infiltrate. Neoplastic follicles and infiltrate extending into adipose tissue stained for CD20, CD10, bcl2 and bcl6. CD3 and CD5 stained background T lymphocytes.

A PET scan was performed after the histology from the lesion was confirmed which demonstrated moderate FDG uptake in left cheek, left external iliac lymph nodes and left tonsil consistent with recurrence of lymphoma. There was no evidence of disease in the right inguinal nodes where the primary site had been in 8 years prior. The patient was referred to a tertiary centre for haematology follow up for further systemic management.

The patient's past medical history also included a wide local excision of the left breast and sentinel lymph node biopsy for invasive ductal carcinoma in 2013. 0/2 lymph nodes were involved. A course of post-operative radiation therapy and hormone therapy with anastrozole was completed. The patient completed 5 years of surveillance follow up with oncology and surgery and no evidence of recurrence was identified.

Furthermore the patient had a laparoscopic right hemicolectomy for a high grade tubular adenoma in the ascending colon in 2008.

The patient did not have any familial history of malignancy.

3. Discussion

The majority of relapses NHL occur in the first 2 years after the completion of treatment. Extra nodal lymphoma comprise 24–48 percent of cases.

The majority of relapses are symptomatic and rarely identified on surveillance imaging alone.

Extra nodal involvement involving skin accounts for 10 percent of cases.

Extranodal involvement often appears in the gastrointestinal system followed by skin [1].

Cutaneous lymphoma is considered an indication of advanced disease. The cutaneous lesions appear macroscopically as papules, ulcers, nodules or a combination of the three. Non-specific cutaneous lesions occur in 13–40% of patients which include pigmentation, pruritis, and exfoliative dermatitis [4]. The reason for multifocal extra nodal lymphoma or preferential involvement of specific extra nodal sites at recurrence is not clear.

Skin involvement of B cell lymphomas can be primary or secondary. Primary cutaneous lymphomas have a better clinical course and prognosis [1].

Clinical behaviour of primary cutaneous lymphomas are usually quite different from that of primary NHL of similar histology with secondary involvement on skin [3].

Skin involvement in NHL occurs through retrograde lymphatic spread from involved lymph nodes, haematogenous dissemination and direct extension to the skin from underlying lymph nodes [4].

NHL typically relapses in the same primary involvement sites. First line treatment for solitary lesions includes surgical excision, antibiotics and radiotherapy.

Despite significant advancements in treatment it is still not usual to achieve cure after relapse with conventional treatment. Response rate with second line therapy (R-ICE or R-DHAP) was 63% in those who had a relapse of NHL. It has been suggested that performing stem cell transplantation could extend treatment responsiveness to 2 years [5,6].

NHL can relapse extensively with cutaneous involvement and the best treatment options in these patients is salvage chemotherapy followed by autologous blood forming stem cell transplant [1].

Factors that influence outcome of relapsed NHL include fitness, chemosensitivity of patient, eligibility for stem cell transplantation, time interval from previous chemotherapy and International Prognostic Index (IPI) score at time of relapse.

Disease free survival is very low in cases who reach second remission [7].

4. Conclusion

It is unusual to have relapse of NHL beyond 2 years of remission, particularly a cutaneous relapse at a site separate to that of the primary disease. In this case excisional biopsy was completed and additional treatment involved systemic therapy given the nodal involvement found on the PET scan.

Conflicts of interest

There are no conflicts of interest including employment, consultancies, stock ownership, honoraria, paid expert testimony, patent applications/registrations, grants or other funding.

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Ethical approval

This study is exempt from ethical approval in this institution.

Consent

Consent has been obtained from the patient. No identifying details or images have been used in the article.

Author contribution

Dr Sunny Dhadlie

- study concept.
- data collection, analysis, interpretation.
- writing the paper.

Contributors

Dr Boris Strekozov

- study concept.

Registration of research studies

Not applicable.

Guarantor

Dr Boris Strekozov, Dr Katherine Zalewska.

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