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LETTER TO THE EDITOR

Paediatric-type follicular lymphoma arising in conjunction with pregnancy

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Paediatric-Type Nodal Follicular Lymphoma (PTNFL) is currently regarded as a distinct clinicopathological entity by the updated 4th edition of the WHO classification of haematopoietic tumours, harbouring a mutational profile mostly involving the MAPK and TNFRSF14/1p36 pathways [1–2]. In view of the current knowledge, PTNFL probably represents a true neoplasm with low malignant potential rather than just a benign clonal expansion [3]. Prevalently, PTNFL occurs in the paediatric male patients, although it sporadically may also affect young adults [4], as observed by us and herein reported. During her pregnancy, a young woman developed an isolated left cervical lymphadenopathy of about 2.8 cm in diameter. Her performance status and laboratory profile were optimal. Therefore, the lymph node was entirely removed ('in toto') for histopathological examination, in the postpartum period within the first ten days. Histopathology of the excisional node biopsy (Figure 1) revealed a totally effaced nodal architecture by large expansile, serpiginous and confluent follicles with a lot of tingible-body macrophages which induced a prominent starry sky pattern. The germinal canters lost polarisation as revealed by high Ki67 immunostaining and showed an admixture of medium-sized large centrocytes, centroblasts and large blastoid cells. These cells were positive for CD20, CD10 and BCL6 with very few scattered BCL6+ cells in the interfollicular region. Furthermore, follicles show a diffuse and strong nuclear staining for FOXP1; either BCL2 or IRF4/MUM1 were negative. Fluorescence *in situ* hybridisation demonstrated the absence of BCL2/IGH rearrangement as wells as the lack of BCL6 and MYC locus rearrangements. Finally, polymerase chain reaction revealed clonality demonstrating IGH and IGK gene rearrangements. Altogether, our findings were consistent with PTNFL observed in a young rather than a truly paediatric patient. A comprehensive work-up, including positron emission tomography/computed tomography scan and bone marrow biopsy, revealed the absence of any abnormalities. Therefore, a 'watch and wait' approach was carried out. A seven-year follow up revealed the absence of recurrence of the disease.

The case of PTNFL was observed by us in a young female. This particularly rare lymphoma typically presents with isolated lymphadenopathy in the head and neck. Despite the 'blastoid' features on histological examination, PTNFL has an extremely indolent clinical behaviour, being surgical excision alone virtually curative [5–6]. Nonetheless, exceptional cases of transformation in high-grade B-cell lymphoma may occur [7]. The differential diagnosis of PTNFL may be quite troublesome. The recognition of this particularly rare lymphoma is important for hematopathologist, given that overlap with florid reactive follicular hyperplasia (RFH) may be a practical problem. Reliable criteria for its diagnosis have been previously illustrated [8]. In this setting the immunohistochemical expression of forehead box protein P1 FOXP-1 may be a useful tool to distinguish PTNFL from RFH [9]. Nonetheless, establish clonality by B-cell receptor studies is mandatory in the diagnostic work up. On the other hand, purely follicular large B-cell lymphoma with IRF4 rearrangement may mimic PTNFL. The strong nuclear expression of IRF4/MUM1 along with rearrangement of IRF4 with an IGH locus, usually allows the distinction between the two [10].

In conclusion, our case represents an example of PTNFL extraordinarily observed in a young woman in conjunction with pregnancy, which, at the best of our knowledge, has never been reported before. We highlight that it may be valuable to provide evidence that pregnancy does not preclude a diagnosis of PTNFL. A rigorous pathological investigation is essential to render the correct diagnosis. Clinicians and hematopathologists should be alert about this possible atypical clinical scenario of PTNFL which can make the diagnosis more complex, to avoid a late diagnosis and to effectively manage the patient.

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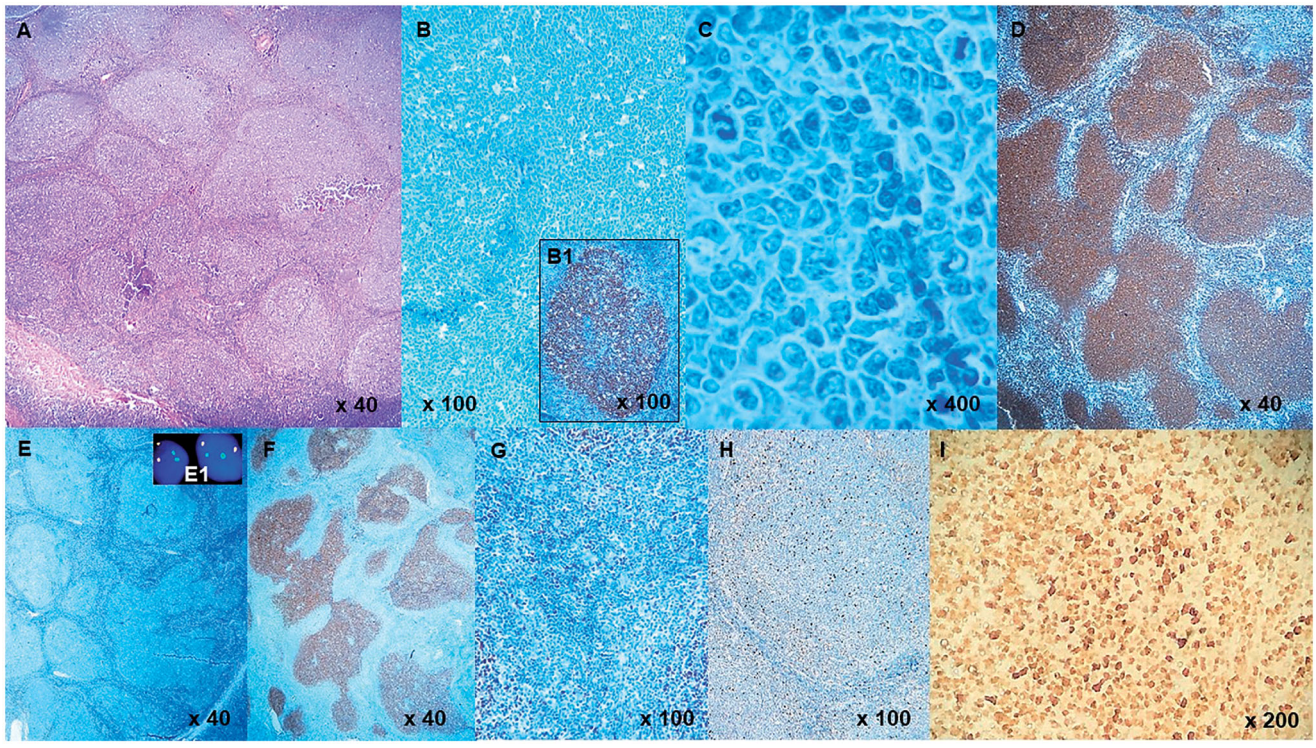

Figure 1. nodal architecture is totally effaced by large expansile follicles (A Hematoxylin/Eosin staining); confluent follicles show a starry sky pattern (B Giemsa staining) along to large centrocytes, centroblasts and blastoid cells (C Giemsa staining). Neoplastic follicles lose polarisation as revealed by immunostaining for Ki67 (insert B1) and express CD20 (D), CD10 (F), BCL6 (G) with very few scattered BCL6+ cells in the interfollicular region. Neoplastic germinal centres show a diffuse and strong nuclear staining for FOXP1 (I) whereas BCL2 (E) and IRF4/MUM1 (H) were absent. FISH analysis demonstrated the absence of BCL2/IGH rearrangement (insert E1).

Disclosure statement

No potential conflict of interest was reported by the author(s).

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