

Brief report

Case report: A case of cytokeratin-positive B-cell anaplastic large cell lymphoma(B-ALCL)

Nagaoka Central General Hospital, Department of pathology ; Pathologist

Toshihiko Ikarashi

As anaplastic large cell lymphoma of B cell lineage(B-ALCL)the immunological stainability as lymphocytes was various and uncertain(1, 2, 3). B-ALCL could be also misdiagnosed as undifferentiated carcinoma or so-called carcinosarcoma because both vimentin, as a immunological mesenchymal marker, and cytokeratins, CAM 5.2 and cytokeratin 8/18 positive in simple epithelia of most secretory and parenchymatous cells, were found in B-ALCL (3, 4). The use of polymerase chain reaction(PCR)-based molecular genetic demonstration of clonal immunoglobulin heavy chain(IgHVDJ)gene rearrangement was the only method to conclude these tumors as B-ALCL(1, 2, 3).

We reported a case of B-ALCL with immunohistochemistry and gene analysis discussed(5).

A 70-year-old female patient was admitted because of multiple tumors in left chest wall, manubrium of sternum, and subclavicular areas, up to 11.5cm indiameter. Core needle biopsy was done from left chest wall tumor. Microscopically there were undifferentiated large cells of medullary and diffuse distribution with marked coagulation necrosis. Immunohistochemical results were listed in Fig.1 : positive to B cell(Fig.2, 3), parenchymal(Fig.4), and mesenchymal markers(Fig.5). PCR for IgHVDJ gene rearrangement could not be shown. Based on these pathological findings, this tumor was diagnosed as B-ALCL.

Ambivalent immunohistochemical findings with both parenchymal and mesenchymal characters bothered pathologists about their histopathological diagnosis. Both immunohistochemistry and PCR-based molecular analysis were important to establish the pathological diagnosis of B-ALCL.

Key words: B-cell anaplastic large cell lymphoma(B-ALCL), cytokeratin-positive, immunohistochemistry, polymerase chain reaction(PCR)-based molecular genetic demonstration of clonal immunoglobulin heavy chain(IgHVDJ)gene rearrangement

Reference :

1 . Lasota J, Hyjek E, Koo CH, Blonski J, Miettinen M.

Cytokeratin-positive large-cell lymphomas of B-cell lineage. A study of five phenotypically unusual cases verified by polymerase chain reaction. *Am J Surg Pathol.*1996 ; 20 : 346-54.

- 2 . Frierson HF Jr, Bellafiore FJ, Gaffey MJ, McCary WS, Innes DJ Jr, Williams ME. Cytokeratin in anaplastic large cell lymphoma. *Mod Pathol.* 1994 ; 7 : 317-21.
- 3 . Sarker AB, Akagi T, Yoshino T, Hoshida Y, Takahashi K, Horie Y. Expression of vimentin and epithelial membrane antigen in human malignant lymphomas. *Acta Pathol Jpn.* 1990 ; 40 : 581-7.
- 4 . Gustmann C, Altmannsberger M, Osborn M, Griesser H, Feller AC. Cytokeratin expression and vimentin content in large cell anaplastic lymphomas and other non-Hodgkin's lymphomas. *Am J Pathol.* 1991 ; 138 : 1413-22.
- 5 . Ikarashi T, Hasegawa H. Detection of monoclonality in B-cell lymphoma by polymerase chain reaction (PCR)with the use of DNA extractin kit(Takara DEX-PAT)for formalin-fixed paraffin-embedded tissues. *Niigata-ken Koseiren Med J.* 2000 ; 10 : 16-20.

短 報

症例報告：サイトケラチン陽性B細胞性未分化大細胞性リンパ腫の1症例

長岡中央総合病院、病理部；病理医
五十嵐俊彦

症例は70才女性、節外性サイトケラチン陽性B細胞性未分化大細胞リンパ腫症例であった。左側胸壁・鎖骨下に多発性腫瘍を形成し、免疫組織染色上CD79a、bcl-2、CAM5.2、vimentinが陽性であった。

キーワード：B細胞性未分化大細胞性リンパ腫、サイトケラチン陽性、免疫グロブリン重鎖JH遺伝子再構成 (Ig-H鎖JH再構成)

Fig. 1. Results of immunohistochemical analysis

lymphocyte	common	CD45	—
	blast	TdT	—
	B cell	CD79a, MB- 1	+
		CD20, L26	—
	medium B cell	bcl- 2	+
		CD5	—
		CD10	—
	T cell	CD3	—
		CD45RO, UCHL 1	—
		CD8	—
		CD45RO, UCHL 1	—
	Hodgkin cell	CD15, Leu-M1	—
		CD30, Ki-1	—
large cell	ALK	—	
NK/T, neuroendocrine	CD56	—	
myelocytic	leukocyte	peroxidase	—
	macrophage	CD68, Kp-1	—
mesenchymal	common	vimentin	+
	muscle	desmin	—
		α -smooth muscle actin	—
	endothelium, stromal cell	CD34	—
	nerve	S100	—
		glial fibrillary acidic protein	—
melanoma	HMB-45	—	
parenchymal	cytokeratin	CAM5. 2	+
		CK7	—
		CK20	—
	mesothelium	calretinin	—
		D2-40	—
		WT1	—
	squamous	p63	—
proliferation	p53	—	
	Ki-67	70% ++	
tumor marker	stromal	c-kit	—
	thyroid	thyroglobulin	—
		CD99, MIC- 2	—

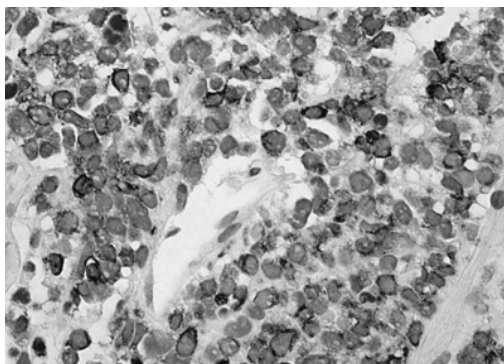


Fig. 2. Immunostain with anti-CD 79 a antibody

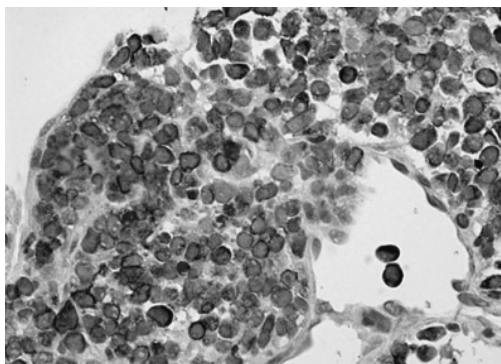


Fig. 3. Immunostain with anti-bcl-2 antibody

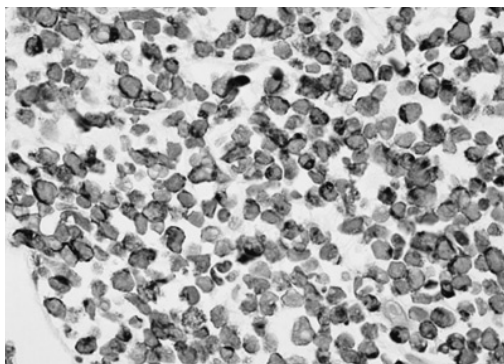


Fig. 4. Immunostain with anti-CAM 5.2 antibody

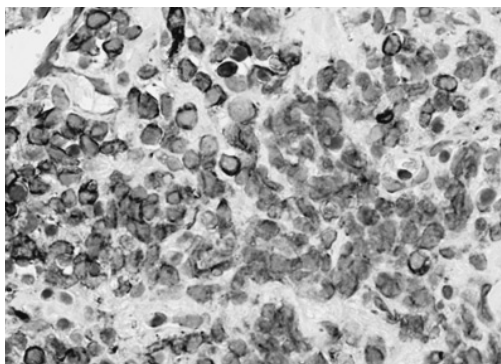


Fig. 5. Immunostain with anti-vimentin antibody

(2008/01/10 受付)