ISSN: 0975-833X

Available online at http://www.journalcra.com

International Journal of Current Research
Vol. 9, Issue, 12, pp.62734-62736, December, 2017

INTERNATIONAL JOURNAL OF CURRENT RESEARCH

CASE STUDY

ATOPIC DERMATITIS- RARE PRESENTING FEATURE OF CHRONIC LYMPHOCYTIC LEUKEMIA

***Dr. Dhruv Kotecha, Dr. Hetal Pandya, Dr. Jaydutt Patel and Dr. Dipesh Patel**

Department of General Medicine, SBKS MI and RC, Sumandeep Vidhyapeeth University, Vadodara, Gujarat (India)

ARTICLE INFO

Article History:
Received 03rd September, 2017
Received in revised form
14th October, 2017
Accepted 29th November, 2017
Published online 27th December, 2017

Key words:
Chronic lymphocytic leukemia,
Skin lesions, Atopic dermatitis.

ABSTRACT

B-cell chronic lymphocytic leukaemia (B-CLL) is the most common form of leukemia and occurs with a male predominance. Chronic lymphocytic leukemia (CLL) infiltrating the skin is uncommon and can present in many different ways. The reported specific skin lesions include nodules, papules, infiltrates, plaques, ulcerations and exfoliative erythroderma. Here we report a case of atopic dermatitis as an usual presentating feature of CLL.

Citation: Dr. Dhruv Kotecha, Dr. Hetal Pandya, Dr. Jaydutt Patel and Dr. Dipesh Patel, 2017. "Atopic dermatitis- rare presenting feature of chronic lymphocytic leukemia", *International Journal of Current Research*, 9, (12), 62734-62736.

INTRODUCTION

Chronic Lymphocytic leukaemia is the most common form of leukaemia having male predominance and indolent course. The common clinical presentation of CLL includes generalised weakness, fever, night sweats, weight loss, feeling of abdominal fullness due to enlarged spleen or liver and enlarged lymph nodes often felt as lumps under the skin. Atopic Dermatitis as presenting feature of CLL is rarely reported. It manifests as appearance of single or multiple skin lesions. Lesions may be localized or generalized. Color may range from violaceous or brick-red to skin colored. Other secondary lesions presents as vasculitis, purpura, generalized pruritus, exfoliative erythroderma, and paraneoplastic pemphigus.

Case report

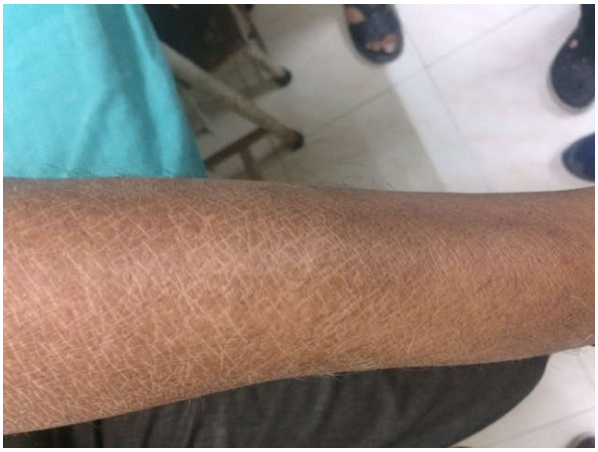
A 60 years old male patient presented with chief complain of low grade fever since last 2 months. Patient had also complain of itching all over body for which he consulted dermatologist and diagnosed clinically as atopic dermatitis (Photograph 1). Patient had normal general and systemic examination with no hepatospleenomegaly or any lymphadenopathy. Patient was further investigated to know the cause of fever. Haematological examination showed leucocytosis with lymphocytosis. Total WBC count is 38,000/cmm with 76% mature lymphocytes. (Photograph 2) Patient was having high ESR which was 59 mm after 1 hour. All other serological and biochemical investigations were normal. On radiological examination chest X-ray was normal but HRCT thorax showed enlarged subcentimetric pre and para tracheal lympnodes. Bone marrow aspiration and biopsy were performed and showed high cellularity. All the cells of myeloid, erythroid and megakaryocytic series were replaced by mature lymphocytes which were more than 70% (Photograph 3,4). Diagnosis was made as chronic lymphoid leukemia on basis of bone marrow findings.

DISCUSSION

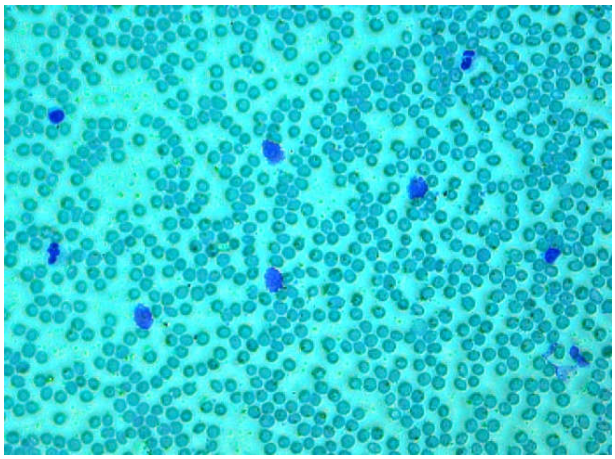
B-cell chronic lymphocytic leukemia (B-CLL) is the most common form of leukemia and occurs with a male predominance (Chiorazzi *et al*., 2005), with majority of patients being over the age of 45 years. B-CLL is a low-grade, B-cell lymphoproliferative monoclonal disorder in which functionally immunoincompetent lymphocytes are progressive accumulated, and thereby affect immune function and normal hematopoiesis. It is associated with an increased incidence of other malignancies, including squamous cell carcinoma, basal cell carcinoma, malignant melanoma and Merkel cell carcinoma (Agnew *et al*., 2004). The most common symptoms and signs of this condition include fatigue, fever, easy bruising and generalized lymphadenopathy (Hallek *et al*., 2008). Although skin infiltration occurs in 3-50% of patients with leukemias or lymphomas overall, it is rare in patients with CLL (Jasim *et al*.,

Corresponding author:* **Dr. Dhruv Kotecha,
Department of General Medicine, SBKS MI and RC, Sumandeep Vidhyapeeth University, Vadodara, Gujarat (India).

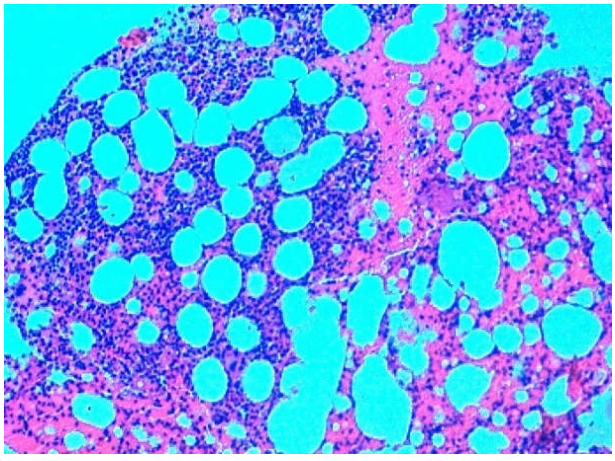
2006; Chang *et al*., 2003). When evident skin involvement is observed in CLL, it usually is seen in Richter syndrome or T-cell CLL (Giles *et al*., 1998; Hoyer *et al*., 1995), which generally indicates a poor prognosis (Chang *et al*., 2003; Neuber *et al*., 1996; Schmid-Wendtner *et al*., 1999). Reports of cutaneous symptoms being the primary manifestation of B-CLL are unusual (Cerroni *et al*., 1996; Padgett *et al*., 2003; Gibson *et al*., 1976). Our patient presented with chief complain of fever and atopic dermatitis which is very unusual finding. Medical literature describing the appearance of cutaneous involvement in patients with B-CLL is limited.



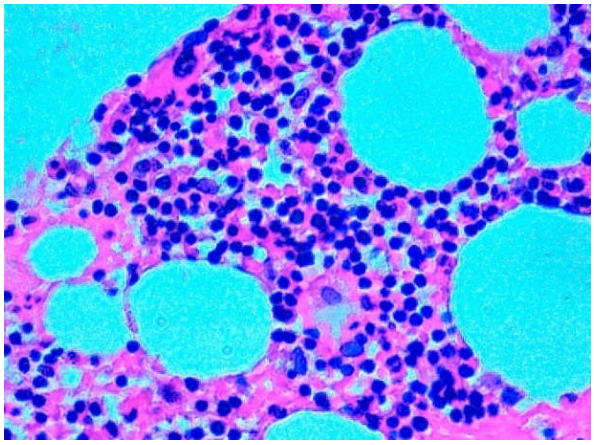
Photograph 1. Atopic dermatitis on upper limb



Photograph 2. Peripheral smear examination showing leucocytosis with lymphocytosis.[Field stain,40 X]



Photograph 3. Bone marrow aspiration and biopsy were performed and showed high cellularity.[Leishman stain,4 X]



Photograph 4. Bone marrow was infilterated by more than 70% of mature lymphocytes [Leishman stain, 40 X]

In the majority of cases, the cutaneous lesions are nonspecific manifestations associated with an impaired immune system (Di Meo *et al*., 2013). The reported specific skin lesions include nodules, papules, infiltrates, plaques, ulcerations and exfoliative erythroderma (Chang *et al*., 2003; Giles *et al*., 1998; Robak and Robak, 2007). The mechanism of cutaneous infiltration has not been fully elucidated. The etiopathogenesis of skin involvement may be because of the impairment of systemic and skin immunity from the association found with herpes zoster infection (Dhir, 1995). According to other theory It has been postulated that skin invasiveness may be caused by the upregulation of intercellular adhesion molecule 1 (ICAM-1) and lymphocyte function-associated antigen 1 (LFA-1) (Uccini *et al*., 1993). Researchers have varied opinions and observations regardimg relation of skin manifestations and prognosis of CLL. Colburn DE, Welch MA, and Giles FJ reported skin infilteration with chronic lymphocytic leukemia is consistent with good prognosis (Colburn *et al*., 2002). However Cerroni L, Watson KM, reported poor prognosis (Watson *et al*., 2006). From this case we can now know the importance of considering leukaemia cutis or atopic dermatitis as an important diagnostic and prognostic feature of CLL and should not be neglected.

REFERENCES

Agnew, K.L., Ruchlemer, R., Catovsky, D., Matutes, E. and Bunker, C.B. 2004. Cutaneous findings in chronic lymphocytic leukaemia. *Br J Dermatol*., 150: 1129-1135.

Cerroni, L., Zenahlik, P., Höfler, G., Kaddu, S., Smolle, J. and Kerl, H. 1996. Specific cutaneous infiltrates of B-cell chronic lymphocytic leukemia: a clinicopathologic and prognostic study of 42 patients. *Am J Surg Pathol*., 20: 1000-1010.

Chang, H.Y., Wong, K.M., Bosenberg, M., McKee, P.H. and Haynes, H.A. 2003. Myelogenous leukemia cutis resembling stasis dermatitis. *J Am Acad Dermatol*., 49: 128-129.

Chiorazzi, N., Rai, K.R. and Ferrarini, M. 2005. Chronic lymphocytic leukemia. *N Engl J Med*., 352: 804-815.

Colburn, D.E., Welch, M.A. and Giles, F.J. 2002. Skin infiltration with chronic lymphocytic leukemia is consistent with a good prognosis. *Hematology*, 7: 187-188.

Dhir, R. 1995. Chronic lymphocytic leukaemia manifestating as exfoliative dermatitis. *Indian J Dermatol Venereol Leprol.,* 61: 102-103.

Di Meo, N., Stinco, G. and Trevisan, G. 2013. Cutaneous B-cell chronic lymphocytic leukaemia resembling a granulomatous rosacea. *Dermatol Online J*., 19: 20033.

Gibson, R., Graham, S., Lilienfeld, A., Schumann, L., Levin, M. and Swanson, M. 1976. Epidemiology of diseases in adult males with leukaemia. *J. Natl Cancer Inst*., 56, 891.

Giles, F.J., O'Brien, S.M. and Keating, M.J. 1998. Chronic lymphocytic leukemia in (Richter's) transformation. *Semin Oncol.,* 25: 117-125.

Hallek, M., Cheson, B.D., Catovsky, D., *et al*. 2008. International Workshop on Chronic Lymphocytic Leukemia: Guidelines for the diagnosis and treatment of chronic lymphocytic leukemia: a report from the International Workshop on Chronic Lymphocytic Leukemia updating the National Cancer Institute-Working Group 1996 guidelines. *Blood*, 111: 5446-5456.

Hoyer, J.D., Ross, C.W., Li, C.Y., Witzig, T.E., Gascoyne, R.D., Dewald, G.W. and Hanson, C.A. 1995. True T-cell chronic lymphocytic leukemia: A morphologic and immunophenotypic study of 25 cases. *Blood,* 86: 1163-1169.

Jasim, Z.F., Cooke, N., Somerville, J.E. and Hay, R.J. 2006. Chronic lymphocytic leukaemia skin infiltrates affecting prominent parts of the face and the scalp. *Br J Dermatol*., 154: 981-982.

Neuber, K., Berg-Drewniock, B., Volkenandt, M. *et al.* 1996. B-cell chronic lymphocytic leukemia associated with high serum IGE levels and pruriginous skin lesions: successful therapy with IFN-alpha 2b after failure on IFN-gamma. *Dermatology*, 192: 110-115.

Padgett, J.K. 2003. Parlette HL III and English JC III: A diagnosis of chronic lymphocytic leukemia prompted by cutaneous lymphocytic infiltrates present in Mohs micrographic surgery frozen sections. *Dermatol Surg*., 29: 769-771.

Robak, E. and Robak, T. 2007. Skin lesions in chronic lymphocytic leukemia. *Leuk Lymphoma*, 48: 855-865.

Schmid-Wendtner, M.H, Sander, C., Volkenandt, M. and Wendtner, C.M. 1999. Unusual manifestations of B-cell disorders. Case 2: chronic lymphocytic leukemia presenting with cutaneous lesions. *J Clin Oncol*., 17: 1084-1085.

Uccini, S., Ruco, L.P., Monardo, F., La Parola, I.L., Cerimele, D. and Baroni, C.D. 1993. Molecular mechanisms involved in intraepithelial lymphocyte migration: a comparative study in skin and tonsil. *J Pathol*., 169: 413-419.

Watson, K.M., Mufti, G., Salisbury, J.R., du Vivier, A.W. and Creamer, D. 2006. Spectrum of clinical presentation, treatment and prognosis in a series of eight patients with leukaemia cutis. *Clin Exp Dermatol*., 31: 218-221.

****