

## Short Communication

# Therapeutic Effect of Vincristine, Adriamycin and Prednisolone (VAP) in Angioimmunoblastic Lymphadenopathy (AIL)

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**Summary.** Five patients, three males and two females, with angioimmunoblastic lymphadenopathy (AIL) are described. The two who received steroids had no response and died 2 and 6 months later. The three patients who received vincristine, adriamycin and prednisolone (VAP) went into remission early and are still in remission with a follow-up of 22–35 months. It is concluded that VAP is effective therapy in AIL.

## Introduction

Angioimmunoblastic lymphadenopathy (AIL) is a proliferative disorder of lymphocytes with characteristic clinical and pathological features [5]. Its etiology remains uncertain [3, 5]. Several modes of therapy have been used with variable response but the best treatment is still unknown [1, 2].

In this report, we describe five cases of AIL. Three of those received a combination of vincristine, adriamycin and prednisolone (VAP). The three went into complete remission and remain in remission after a follow-up period of 22–35 months.

## Patients and Methods

Five patients were found to fulfill the pathological criteria of angioimmunoblastic lymphadenopathy. The first two were given steroids only and the three others were given more intensive chemotherapy with maintenance therapy.

Patients were followed up monthly and the state of their disease was assessed clinically and defined as in remission or not.

## Results and Discussion

Tables 1 and 2 show the clinical and laboratory findings in five patients with AIL.

AIL is considered by many authors as benign lymphocyte proliferation, probably secondary to antigenic stimulation [3, 5]. The clinical course of the disease is "malignant", however, with a mortality of 40%–80% and a 2-year survival of less than 33% [1, 2]. Spontaneous remission may occur after which the disease may reappear with variable intervals [2].

Though the nature of AIL is still disputed, the clinical course is often "malignant". There is considerable evidence that the disease shares certain features with neoplastic conditions, including karyotypic abnormalities [4]. Some cases of AIL may transform into malignant lymphoma, and this transformation may be more common than previously recognized. Nathwani et al. [6] have found 43% of 84 lymph nodes removed for diagnosis to have features of immunoblastic lymphoma in addition to AIL. Of 23 patients not showing these features at diagnosis, 35% were found to have them upon subsequent biopsy or autopsy.

It has been implied that intensive chemotherapy can be harmful in AIL [3]. None of our three patients who received

**Table 1.** Clinical characteristics of five patients with AIL

Case no.	Age (years)	Sex	Presenting symptoms	Clinical findings
1	46	M	Fever, night sweating, loss of weight	Maculopapular skin rash, generalized lymphadenopathy, hepatosplenomegaly
2	45	M	Lymphadenopathy, night sweating	Generalized lymphadenopathy
3	19	F	Arthralgia, epistaxis, vaginal bleeding, fever	Petechial rash, cervical lymphadenopathy, hepatosplenomegaly
4	50	M	Pruritus, cervical swellings	Cervical and axillary lymphadenopathy
5	22	F	Fever, night sweating, pruritic skin rash, weight loss	Maculopapular skin rash, generalized lymphadenopathy, splenomegaly

**Table 2.** Laboratory findings in five cases with AIL

Case no.	Hb. (g/dl)	White cell count ( $\times 10^9/l$ )	Platelets ( $\times 10^9/l$ )	Retic./100 RBC	Direct Coomb's test	Diffuse hypergamma-globulinemia	IgG (g/l)	IgA (g/l)	IgM (g/l)	ANF	Anti-DNA
1	7.2	2.7	82	ND	(-)	No	15.00	2.00	0.90	(-)	ND
2	12.8	11.7	50	2.2	(+)	Yes	28.30	4.21	9.96	ND	ND
3	7.0	0.3	15	0.2	(-)	Yes	23.70	3.66	2.78	(+)	(+) 1,060 U/ml
4	13.7	7.9	270	0.6	(-)	Yes	22.85	3.50	3.32	(-)	(-)
5	10.5	31.0	330	0.5	(-)	Yes	27.80	3.44	2.84	(-)	ND

ND = not done; (-) = negative; (+) = positive

VAP had significant neutropenia. One required blood transfusion during therapy and another had vincristine neurotoxicity. Our three patients are still alive and well after variable periods of follow-up of 22–35 months. Although the number of cases is small and the follow-up period short, intensive chemotherapy containing adriamycin is justified in severe cases of AIL.

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## References

1. Case records of the Massachusetts General Hospital (1980) Case 11. *N Engl J Med* 302: 678–684
2. Cullen MN, Stansfeld AG, Oliver RTD, Lister TA, Malpas JS (1979) Angioimmunoblastic lymphadenopathy: Report of ten cases and review of the literature. *Q J Med* 44: 171–182
3. Frizzera G, Moran EM, Rappaport H (1975) Angioimmunoblastic lymphadenopathy: Diagnosis and clinical course. *Am J Med* 59: 803–818
4. Kaneko Y, Larson RA, Variakojis D, Haren JM, Rowley JD (1982) Nonrandom chromosome abnormalities in angioimmunoblastic lymphadenopathy. *Blood* 60: 877–887
5. Lukes RJ, Tindle BH (1975) Immunoblastic lymphadenopathy: A hyperimmune entity resembling Hodgkin's disease. *N Engl J Med* 292: 1–8
6. Nathwani BN, Rappaport H, Moran EM, Pangalis GA, Kim H (1978) Malignant lymphoma arising in angioimmunoblastic lymphadenopathy. *Cancer* 41: 578–606

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