INTERNATIONAL JOURNAL OF LEPROSY Volume 55, Number 3
Printed in the U.S.A.

Primary Visceral Virchowian (Lepromatous) Hanseniasis[1]

Rubem David Azulay[2]

This report refers to a unique case of hanseniasis of the virchowian type with primary visceral involvement. There is no reference in the world literature of a similar case. The patient has been observed for more than 5 years. The case has been presented in the section of case presentation at the XVI International Congress of Dermatology in Tokyo in 1982.

CASE REPORT

A married Caucasian female, 50 years old, presented on 21 May 1981. In the previous 8 months, she had experienced occasional attacks of fever (37°–40°C), polyarthralgia, weight loss, anorrhexia, polyadenopathy, and severe anemia. Each attack lasted for several weeks and subsided without any specific medication. Aspirin and analgesic drugs were used. After several weeks without symptoms, a new attack appeared and several relapses occurred. In the meantime there was a progressive enlargement of the lymph nodes, spleen and liver (Fig. 1). A presumptive diagnosis of lymphomà was made. Biopsies of the lymph nodes, liver, and bone marrow showed an infiltration of Virchow's cells, lymphocytes, and plasma cells (Fig. 2). Acid-fast staining with Wade's technique revealed huge numbers of acid-fast bacilli and globi (Fig. 3). A careful examination of the skin and peripheral nerves did not show any involvement of these structures by the process. Several scrapings of nasal mucosa, earlobes, and other points of the skin were negative for acid-fast bacilli. A culture for atypical mycobacteria with material from the bone marrow was negative. The diagnosis of primary visceral virchowian hanseniasis was made. Treatment with rifampin, 600 mg daily, and dapsone, 100 mg daily, was started. Mitsuda's test was negative. The hemogram showed anemia but leukocytes were essentially normal. Two months after beginning treatment erythematous nodules appeared on the anterior aspects of the legs. A biopsy confirmed the diagnosis of erythema nodosum of hansenia ac nature due to the presence of rare acid-fast bacilli and globi.

A few weeks later she became icteric without fever. The laboratory tests showed a SGOT of 50, a SGPT of 125, alkaline phosphatase of 85, total bilirubin of 4.2, indirect bilirubin of 0.7, direct bilirubin of 3.5, the hepatitis B surface antigen (HBsAg) was negative, and the erythrocyte sedimentation rate was 108 mm/hr. It was thought that her condition could be jaundice due to dapsone. The dapsone was discontinued and clofazimine, 100 mg daily, begun. The jaundice disappeared in several weeks. New tests showed a SGOT of 30, a SGPT of 44, and an erythrocyte sedimentation rate of 17 mm/hr.

The patient's course was characterized by occasional outbreaks of fever which subsided in a few days with thalidomide (200 mg daily). In a few months she presented with discrete brown pigmentation only in points where there had been erythema nodosum lesions and icthyosis in the legs (side effects of clofazimine).

In December 1981, the anemia had disappeared and the hemogram was normal. In February 1982, the liver had regressed to 80% and the spleen to 40% of their initial size. At that time, she presented with a severe attack of bilateral neuralgia of the ulnar and common peroneal nerves which subsided with aspirin and thalidomide. Over the next several months she had occasional, very few, and discrete lesions of erythema nodosum, and even small lesions of necrotizing vasculitis with paresthesias involving the hands and feet. On 15 September 1982, clofazimine was stopped due to brown pigmentation in the legs corresponding to the points where she had had erythema nodosum. Dapsone was begun with small dos-

[1] Received for publication on 22 December 1986; accepted for publication in revised form on 25 March 1987.

[2] R. D. Azulay, M.D., Serviço de Dermatologia, Hospital Universitário, Universidade Federal do Rio de Janeiro, Rio de Janeiro, RJ, Brasil.

Reprint requests to Prof. Azulay, Avenida Atlântica 3.130/701, Rio de Janeiro 22070, Brasil.

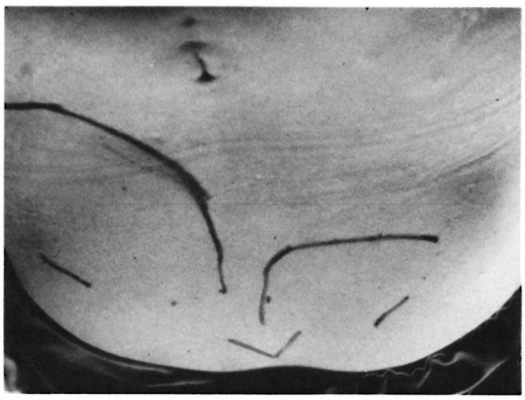

FIG. 1. Hepatomegaly and splenomegaly.

es (50 mg twice a week) which over a few weeks was gradually increased to 100 mg daily. Additionally, she received 1200 mg rifampin monthly. In June 1983, she had the following tests: a) A biopsy of normal skin showed no lesions and no bacilli. b) A biopsy of a nodule on the leg showed erythema nodosum with very few bacilli. c) A liver biopsy showed Virchow's cells in the portal spaces but no bacilli. d) An imprint of bone marrow showed no bacilli.

In January 1984, she had bilateral ulnar neuritis which did not respond to thalidomide but responded well to prednisone 20 mg daily. Since October 1984, the liver and spleen have been normal in size. In December 1984, new biopsies of the liver, bone marrow, and skin (anterior aspect of the leg) did not show any bacilli. A very few Virchow's cells were seen in the liver but not in the skin or bone marrow. Skin tests at that time showed the following: trichophytin 6 mm induration, candidin 14 mm, vaccinia 6 mm, histoplasmin 6 mm, brucella 5 mm, PPD (2 units) negative, and dinitrochlorobenzene (DNCB) reactor. During 1985, she occasionally had a few erythematous nodules on her legs but no fever.

During the time of observation (1981–1986): a) No bacilli were found in the nasal mucosa or earlobes (many searches); b) the hemograms, which showed hypochromic anemia in the beginning, gradually became normal; c) several Mitsuda and PPD tests were negative; d) several X rays of the lungs were normal; e) several antinuclear antibody (ANA), lupus erythematosus (LE) cells, anti-streptolysin O (ASO), latex, Waaler-

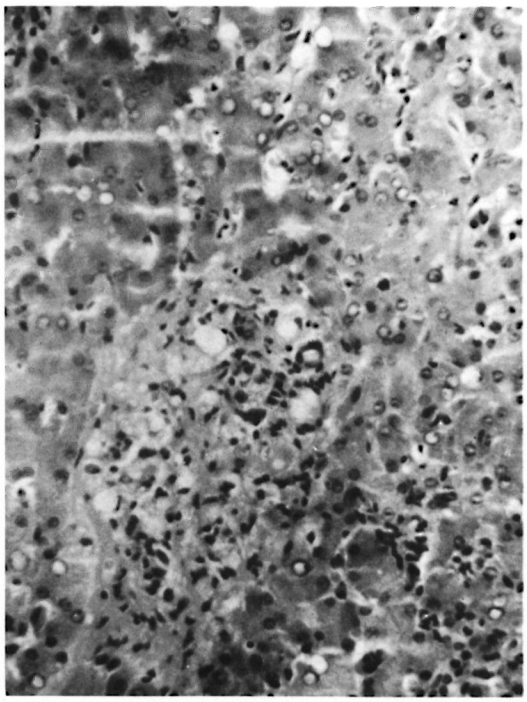

FIG. 2. Liver: Virchow's cells infiltration in the portal spaces (H&E ×600).

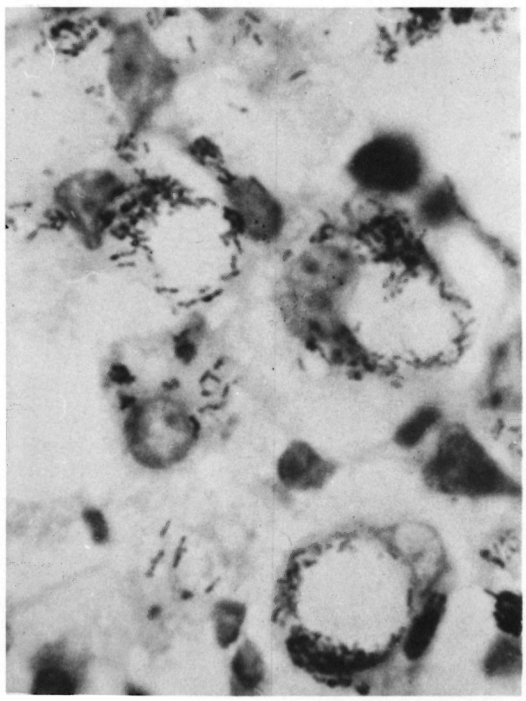

FIG. 3. Liver: bacilli and globi in the portal spaces (acid-fast stain by Wade's technique ×1000).

Rose, VDRL, urine creatinine, urea, uric acid, Na, K, Cl, lipids, SGPT, serum proteins, and feces examinations were normal; f) C-reactive protein determinations (several) were always positive; g) T and B lymphocytes, T suppressor and T helper, immunoglobulins (exception IgM, which was increased), CH50, C3, and C4 values were normal; and h) several times she had hyperglycemia which was controlled with chlorpropamide.

COMMENTS

Infection with *Mycobacterium hanseniae* produces mainly two types of immunological reactions which are known as polar forms: the benign tuberculoid pole and the malignant virchowian pole ([6]). In the benign tuberculoid pole, skin and peripheral nerves are involved, while in the malignant virchowian pole, besides the skin and peripheral nerves, several viscera are also involved.

One hundred percent of virchowian cases present with involvement of the skin with different percentages of visceral involvement according to the nature of the viscera; the most common viscera affected are the liver and spleen. Since Hansen and Looft's publication ([2]), we know that the lymph nodes, liver, and spleen are attacked by *M. hanseniae*. Other authors ([3–5]) have confirmed that observation and have found high percentages of involvement (up to 100%). The bone marrow has also been reported as involved in virchowian hanseniasis. Virchowian visceral invasion has been described as concomitant or secondary to skin, mucosal, and nerve involvement.

Virchowian hanseniasis patients have been described with a single skin lesion ([7]). In our case the visceral involvement was primary. The following arguments are presented: a) No bacilli were found in the nasal mucosa, earlobes, or other skin points during the time of observation of the case (1981–1986). b) There was an absence of any skin lesion except for erythema nodosum which was only in the legs and which appeared 2 months after the beginning of treatment. Consequently, they were secondary to the very severe previous visceral involvement. c) The brown pigmentation due to clofazimine was observed only in the places where erythema nodosum was seen. d) The neural symptomatology was observed 1 year after the beginning of the medical observation and 20 months after the onset of the disease. To date there has not been any enlargement of peripheral nerves and no muscular atrophy.

The differential diagnosis in this patient must include miliary tuberculosis. Many of the signs and symptoms and the clinical course of the disease would be compatible with miliary tuberculosis of a chronic form. This diagnosis can be ruled out for the following reasons: a) the presence of vacuolated macrophages containing acid-fast bacilli (Virchow cells) which are not seen in tuberculosis, b) the presence of globi which are not seen in tuberculosis or other mycobacterioses, c) negative mycobacterial cultures at 37°C and at room temperature, d) the absence of necrosis, and e) episodes of neuritis which are not seen in tuberulosis.

Regarding the jaundice she had, we think it was not due directly to drugs. Dapsone was stopped at that time, but later on it was reintroduced without side effects. Rifampin was not stopped at that time and even so the jaundice disappeared. We think that the jaundice was obstructive and probably due to reactional enlargement of lymph nodes of the hepatic hilus.

SUMMARY

A case of primary visceral virchowian hanseniasis is presented. The onset and symptoms of the disease made one think that it was a lymphoma because of the severe enlargement of the liver, spleen, and lymph nodes. Biopsies of the liver, lymph nodes, and bone marrow revealed virchowian infiltration with acid-fast bacilli and globi. The skin was free of lesions and negative to bacilli, and there were no neural symptoms.

RESUMEN

Se presenta un caso de hanseniasis visceral virchowiana primaria. Al principio, la sintomatología de la enfermedad hízo pensar que se trataba de un linfoma debido a la severa hiperplasia del hígado, bazo, y ganglios linfáticos. Las biopsias del hígado, ganglios linfáticos y médula ósea revelaron la infiltración virchowiana con bacilos ácido resistentes y globi. La piel estuvo libre de lesiones y de bacilos además de que no hubieron síntomas neurales.

RÉSUMÉ

On présente ici un cas d'hanséniase virchowienne viscérale primaire. L'apparition de la maladie, de même que les symptômes présentés, font songer à un lymphome, car le foie, la rate et les ganglions lymphatiques étaient fortement augmentés de volume. Les biopsies pratiquées au niveau du foie, des ganglions lymphatiques, et de la möelle osseuse, ont révélé une infiltration virchowienne avec présence de bacilles acido-résistants et de globi. La peau ne présentait pas de lésions; elle était négative au point de vue bacilloscopique. On n'a pas observé de symptômes neurologiques.

REFERENCES

1. Azulay, R. D., Allan, S. and Nascimento, A. Primary visceral virchowian hanseniase (case presentation). *Proc. XVI International Congress of Dermatology, 1982.* Tokyo: University of Tokyo Press, 1983.
2. Hansen, G. H. A. and Looft, C. Die Lepra vom klinischen und pathologisch-anatomischen Standpunkte. Cassel: T. G. Fisher & Co., 1894.
3. Jeanselme, E. *La Lepre.* Paris: G. Goin & Cie, 1934.
4. Kobayashi, W. Uber die viscerale Lepra. Monogr. No. 4, Acta Derm. [A] Inst. Derm. Univ. Imp. Kyoto, 1929.
5. Mitsuda, K. and Ogawa, M. A study of one hundred and fifty autopsies on cases of leprosy. Int. J. Lepr. **5** (1937) 53–60.
6. Rabello, F. E. A clinico-epidemiological classification of the forms of leprosy. Int. J. Lepr. **5** (1937) 343–356.
7. Yoder, L. J., Jacobson, R. R. and Job, C. K. A single skin lesions—an unusual presentation of lepromatous leprosy. Int. J. Lepr. **53** (1985) 554–558.