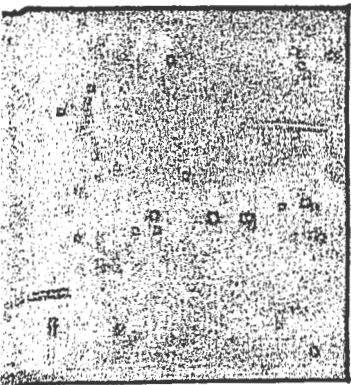
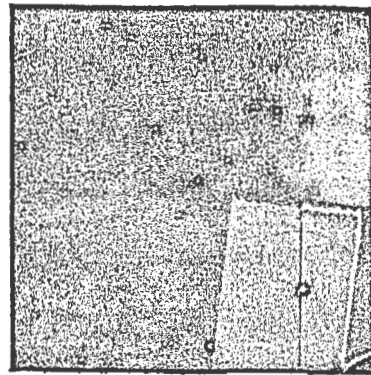
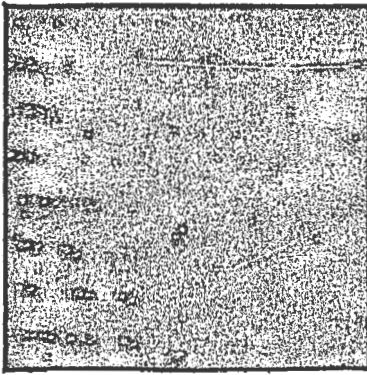
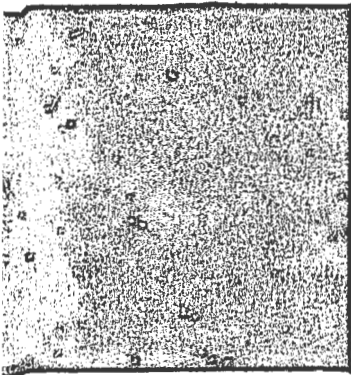
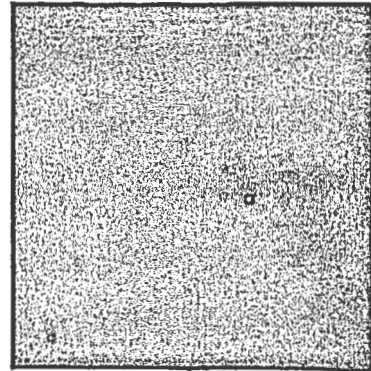
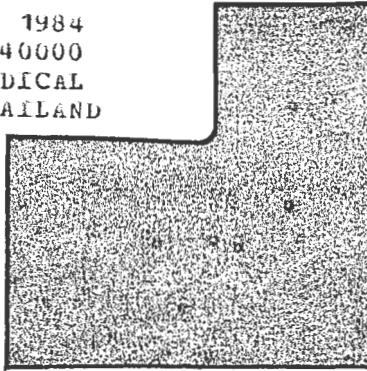


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Incidence of Anemia in Leprosy Patients Treated with Dapsone*

*Siripen Puavilai, M.D.,** Saengsuri Chutha, M.D.,** Niwat Polnikorn, M.D.,**
Penwadee Timpatanapong, M.D.,** Pariya Tasanapradit, M.D.,**
Somyot Charuwichitratana, M.D.,** Achara Boonthanom, M.D.**
and Harn Wongwaisayawan, M.D.***

Dapsone is commonly used for the treatment of leprosy, but it is known to have undesirable hematological side effects. The most common one is hemolysis which occurs in almost every patient taking 200 to 300 mg dapsone per day. Dosages of 100 mg or less in normal healthy persons and 50 mg or less in healthy individuals with glucose-6-phosphate dehydrogenase (G-6-PD) deficiency does not cause hemolysis⁽¹⁾. Methemoglobin is also common and Heinz body formation might occur⁽²⁾. Leukopenia, agranulocytosis, and pseudoleukemia are rare toxic effects of dapsone⁽²⁻⁴⁾.

We have observed several patients treated with dapsone 50-100 mg daily who developed anemia in spite of normal G-6-PD level. The purpose of this paper is to find out the frequency, and onset of anemia in leprosy patients treated with dapsone.

Material and Method

One hundred new cases of leprosy patients seen at Ramathibodi Hospital during 1979-1983 were considered for this study. Patients under 50 kg body weight received 50 mg dapsone per day, for those over 50 kg body weight, 100 mg per day of dapsone was given.

The hemoglobin (Hb), and hematocrit (Hct), glucose-6-phosphate dehydrogenase (G-6-PD) level were determined before the administration of dapsone.

Laboratory tests were done before taking dapsone and at 6 months and one year thereafter. These included complete blood count (CBC), urinalysis, stool examination, reticulocyte count, methemoglobin, Heinz body, Coombs' test, blood urea nitrogen (BUN), creatinine,

lactic dehydrogenase (LDH), serum glutamic oxaloacetic transaminase (SGOT), serum glutamic pyruvic transaminase (SGPT), total protein, albumin, bilirubin and urine hemosiderin pigment. The CBC, reticulocyte count, methemoglobin and Heinz body were also determined at the 2nd week, and at the 1st, 2nd, 3rd, 9th and 12th month after treatment. Of the 100 patients, 43 cases who had hemoglobin below 11 g/100 ml with parasitic infestation and those who could not attend the clinic regularly were excluded from the study. A total of 57 cases were included. The age ranged from 17-68 years. The types of leprosy diagnosed in these patients were indeterminate in 16 cases, tuberculoid 18 cases, borderline tuberculoid 8 cases, borderline borderline 7 cases, borderline lepromatous 6 cases, and lepromatous leprosy 2 cases.

Methemoglobin was measured by the method of Evelyn and Malloy⁽⁵⁾.

The data was statistically evaluated by Student's *T* test.

Result

There were 51 cases with normal G-6-PD level and 6 with G-6-PD deficiency. Of the normal G-6-PD group there were 31 males and 20 females. Anemia (hemoglobin dropped one gram per cent or more) developed in 40 cases (78.4%). These included 25 males and 15 females. Of these 40 cases, 15 had a drop of hemoglobin 1 g/100 ml from the baseline, nine had 2 g/100 ml drop, 3 g/100 ml drop in 12 and 4 g/100 ml drop in 4 cases. Significant anemia ($P < 0.05$) developed

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