

V.

Case V.—Kasi

Date.	Body weight.	Size of Spleen.	Blood examination.
18-9-15	...	Spleen felt just below costal arch.	R.B.C.—2,400,000 W.B.C.—4,800 Hb.—50%
27-9-15	...	Spleen cannot be felt below costal arch.	R.B.C.—2,800,000 W.B.C.—5,600 Hb.—52%

VI.

Case VI.—Narayan.

Date.	Body weight.	SIZE OF SPLEEN.		Blood examination.
		Lower border extends along left nipple line.	Longest transverse diameter begins from	
4-9-15	4st. 6lbs.	5" below costal arch.	½" left of middle line.	R.B.C.—2,800,000 W.B.C.—1,600 Hb.—46%
11-9-15	...	4½" Do. ...	1½" Do. ...	R.B.C.—2,600,000 W.B.C.—4,400 Hb.—53%
18-9-15	4st. 4½lbs	4" Do. ...	2" Do. ...	R.B.C.—2,600,000 W.B.C.—4,000 Hb.—54%
2-10-15	Do. ...	Do. ...	Do. ...	R.B.C.—3,800,000 W.B.C.—6,400 Hb.—70%

N.B.—This case was treated with electargol and tartar emetic.

SOME CLINICAL OBSERVATIONS ON KALA-AZAR.*

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SOME CLINICAL AND MICROSCOPICAL SIGNS WHICH, TAKEN TOGETHER, ARE PATHOGNOMONIC OF THIS DISEASE IN ITS EARLY STAGES.

IT is often thought that it is very difficult to diagnose a case of Kala-Azar in its early stage; but it is not so, in my experience, as long as one pays attention to the following details which help to distinguish Kala-Azar from Typhoid or Paratyphoid. While working with Dr. Korke in the Kala-Azar investigations at Madras we had several private cases sent to us by private practitioners of the city. Almost all those cases were in the initial stages. The peripheral blood of these patients was examined every week (each time about ½ dozen slides), but I rarely found the parasites in the early stages. Still, other changes in the blood and the characteristic temperature of the disease made us suspect a case

to be one of Kala-Azar and we were quite right in suspecting them to be so, for the blood of such cases showed the parasites later on.

I. *Blood Examination.**—The blood in almost all our cases showed—

- (a) a well-marked Leucopenia.
- (b) the occurrence of endothelial cells in the peripheral blood.
- (c) increase of mononuclear Leucocytes as in case of many protozoal diseases.
- (d) fragility of the Leucocytes containing the parasites as observed in blood films.

II. *Temperature.*—The patient tells you that he gets attacks of fever off and on, with occasional chill, and that the fever is rarely high, but at the same time he complains to you that he feels very much exhausted. He or his parents tell you that it is very astonishing to them that the patient gets much reduced and exhausted, even though no high temperatures are noticed. In the early stage of the disease, the temperature never comes to normal, but keeps between 99° and 102° or 103°. As it was very difficult for me to diagnose Kala-Azar in its early stages by means of the blood examination (as the peripheral blood rarely shows the parasite in the early stage of the disease), I had recourse to one method of confirming my suspicions about the case by asking several of my private patients to get me a temperature chart with the patients' temperature noted every two hours (I talk of private patients in discussing the early stage of the disease, for early cases are rarely admitted into hospital, and all the cases we had, in the Madras General and Royapettah hospitals during the investigations, were chronic and complicated ones). Such two-hourly temperature charts show one thing characteristic of the early stage of the disease and that is, there are *two if not three diurnal rises* varying from 5° to 1° every rise. (This can by itself be considered pathognomonic of this disease). These two or three diurnal rises do not occur in the temperature of chronic patients.

III. *The rapid loss of weight.*—This is not so well marked in the later or chronic stage of the disease as in its earlier stage, for it is in the latter stage that the patient loses his appetite and the fever is more continuous; whereas in the chronic stage the loss of weight is very gradual, and there may even be a well-marked fluctuation in the patients' weight, taken every week, (the patient gaining a pound or more this week, and losing more than what he gained in the course of the next if any complication occurs). It may seem strange that loss of weight is less rapid in the

* N.B.—In preparing a film for examining the blood of a patient subject to Kala-Azar, it is best done by spreading the blood with a surgical needle so as to get tails, at the end of the film, which show a good number of Leucocytes where we are to search for the Leishman-Donovan bodies.

* Forwarded by Major J. W. Cornwall, I.M.S., Coonoor.

chronic or later stage of the disease, than in its early stage; but I found it to be true in many cases and offer the following explanations:—

(1) Chronic patients, even though their stomach is pressed on all sides by the hugely enlarged spleen and liver, eat voraciously and digest well for the time being.

(2) The loss of weight in chronic cases is counterbalanced by the hugeness of the spleen and liver.

IV. The skin of the Kala-Azar patients is often distinctly darker and drier than it should be, and sometimes it is furfuracious.

V. In a majority of our cases, the onset of the disease was attended with diarrhoea or dysentery or both. The attack is sometimes so mild that the patients do not consider it necessary to seek for treatment.

VI. The family history of our cases revealed to us that there was, in a considerable number of them, a death in their house previously, of a sister or a brother or a close relation of the patient.

N.B.—(a) No difficulty should be experienced in diagnosing a case of Kala-Azar in its early stage, if one can closely notice the aforesaid premonitory symptoms and signs, and it ought never to be mistaken for malaria or typhoid. As the leucocytosis, resulting from the inflammatory conditions, affords a greater facility and scope for one to find the Leishman-Donovan bodies which occur usually in the leucocytes, it is advisable to examine the blood of a Kala-Azar patient when he suffers from any inflammatory complications attended with high fever, such as diarrhoea, dysentery, bronchitis and pneumonia, etc., (which are very common with these patients), and in uncomplicated cases it is better to examine the blood for parasites during the pyrexial periods of the disease.

N.B.—(b) Two of our cases showed parasites in the peripheral blood, but it was very astonishing that no enlarged liver or spleen could be palpated even on deep inspiration, nor could be percussed with the greatest care possible. This shows that one cannot be guided by the absence of enlargement of these organs, nor should one wait for their enlargement for the diagnosis. As a rule, at least half a dozen films of the peripheral blood every third or fourth day must be examined.

N.B.—(c) The palpebral conjunctivae of these patients may be quite red, the bed of their nails may be red enough, and the tongue shows no signs of anæmia, but all the same a Kala-Azar patient develops anæmia which is often overlooked when one confines one's attention only to the parts mentioned above. In addition to the microscopical signs of anæmia in the blood, the one important, but often neglected, guiding clinical features of anæmia most marked in this disease, is the scarcely perceptible œdema of the leg or foot, which can be detected by the "pitting" caused by gentle pressure applied over the anterior aspect of the tibia or the dorsum of the foot. In my experience I consider that the occurrence of this œdema marks the clinical boundary between the early and later stages of this disease, for, from the date when this œdema (be it caused by anæmia or the pressure exerted by the enlarged organs on the veins of the abdomen) is noticed, the patient begins to lose much flesh and develop complications.

ON COMPLICATIONS AND TERMINATION.

Pneumonia in a case of Kala-Azar proves fatal. Among the cases we treated, a child recovered from *Cancerum oris* complicating this disease. We never saw any of our cases recovering from the complication of pneumonia, but many cases recovered from severe forms of diarrhoea and dysentery beautifully under the treatment mentioned below.

ON THE TREATMENT.

Atoxyl, salvarsan, ramellin (a French patent), and mixtures containing potassium iodide, mercury and arsenic, and also nuclein and bone marrow tabloids, were tried in many of our cases, but with little success. *Lactopeptin* with bismuth has done immense good in these patients for diarrhoea of a mild type; but severe forms of diarrhoea and dysentery would not yield to any drug except *Emetine Hydrochloride* in $\frac{1}{2}$ to 1 grain doses by the mouth once a day or twice a day, of course with a strict diet.

A Mirror of Hospital Practice.

A CASE OF PRIMARY ATHEROMA OF THE PULMONARY ARTERY AND ITS BRANCHES CONTRIBUTING TO VALVULAR INSUFFICIENCY OF THE HEART.

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MECHANICAL dilatation of the right ventricle leading to relative tricuspid insufficiency results from an increased intraventricular pressure at the beginning of the systole due to an obstruction in the pulmonary circulation, and, leaving aside abnormalities of the pulmonary orifice, according to Osler and McCrae, this increase of intraventricular pressure is caused by over-exertion, asphyxia and abnormal fixation of the chest wall, as in some forms of labour. Among the other causes which raise the intraventricular pressure, passing mention is made of sclerosis of the lung arteries along with chronic bronchitis, bronchiectasis, chronic fibroid disease of the lungs and pleura, and disease of the mitral valve. It is a recognised fact that diseases of the lungs act directly upon the right ventricle.

Dilatation with atheroma of the pulmonary artery in connection with bronchitis and emphysema is stated to have been first noticed by Whitley, and that specimens illustrating the condition was put up by Fagge. In the Madras Medical College Museum specimens of atheroma of the pulmonary arteries and their branches, secondary to emphysema and mitral stenosis, have been recently collected. But the literature is scanty as regards pulmonary atheroma as a