

## MALIGNANT LYMPHOMA OF THE ORBIT WITH GENERALIZED METASTASES\*†

BY

G. C. SOOD, S. R. K. MALIK, D. K. GUPTA, AND A. N. GUPTA

*From the Department of Ophthalmology, Maulana Azad Medical College, New Delhi, India*

A Hindu girl aged 9 years was brought to the ophthalmic department of the Irwin Hospital, New Delhi, on January 1, 1964, with a painless swelling of the right eye. For the past 3 months the parents had noticed a small swelling on the temporal side of the right eye near the external canthus. As this swelling increased with moderate rapidity the child also complained of gradual loss of vision. After about 6 weeks other swellings appeared on the forehead, right arm, left leg, chest, and below the right clavicle. She had a mild to moderate degree of fever from time to time. There was no history of cough or any other complaints.

*Examination.*—She was of slender build, slightly wasted, with pulse, temperature, and blood pressure normal. There was a massive, tender, firm lobulated swelling 6" × 4" extending from the inner canthus to the mastoid region and down to the level of the nares (Fig. 1). The medial margin of the swelling could not be palpated. The overlying skin was tense but free, and dilated veins were visible over it. The right upper lid drooped and was immobile. The eye ball was displaced downwards, medially, and forwards, with limitation of movement in all directions. There was moderate chemosis and hyperaemia of the lower bulbar conjunctiva. The cornea was exposed, xerotic, and sloughed in places. The anterior chamber, iris, pupil, and lens could not be seen, and there was no perception of light.

The following swellings were also present:

- (i) Four firm tender swellings varying from 1" × 1" to 2¼" × 2¼" on the forehead (Fig. 1);
- (ii) A firm tender mobile swelling 3" × 2" over the medial half of the right clavicle (Fig. 2);
- (iii) A firm tender 3" × 4" swelling on the left elbow (Fig. 1) restricting movement of the joint;
- (iv) A swelling over the right ankle limiting movement of the joint (Fig. 3, opposite);
- (v) A firm tender swelling 1" × 4" in the right popliteal fossa.

There was no generalized lymphadenopathy and only a few cervical glands were palpable.

*Laboratory Studies.*—Hb 3 g. per cent.; leucocytes 10,000 per mm.<sup>3</sup> (myelocytes 4, megalocytes 4, metamyelocytes 5, polymorphs 68, lymphocytes 12, monocytes 4, eosinophils 3). Reticulocyte count 15 per cent. Erythrocyte sedimentation rate 110 mm. 1st hr (Westergren). Stool and urine examinations,

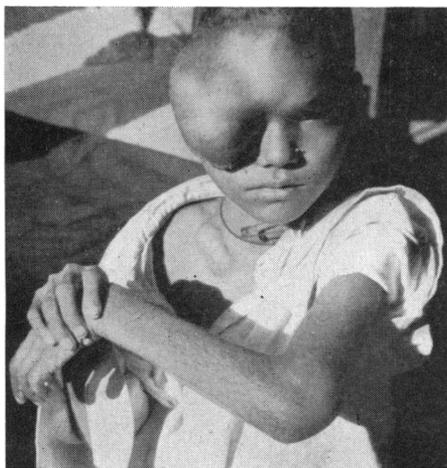


FIG. 2.—Metastatic swelling over medial half of right clavicle.

FIG. 1.—Orbital lymphoma with metastatic swellings on forehead and involvement of left elbow.

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† Address for reprints: as above.

including tests for Bence-Jones protein, were negative. Blood urea 38 mg./100 ml. Plasma protein 8.6 g./100 ml. (albumin 3.17, globulin 5.5, A/G ratio 0.6).

The bone marrow showed no leukaemoid reaction.

*Radiology.*—The right orbit showed a soft tissue shadow. The abdomen showed a wide area of rarefaction (osteolysis) over the right ilium which might be due to secondaries. The chest showed destruction of the anterior ends of the right 4th, 7th, and 9th ribs.



FIG. 3.—Involvement of left ankle.

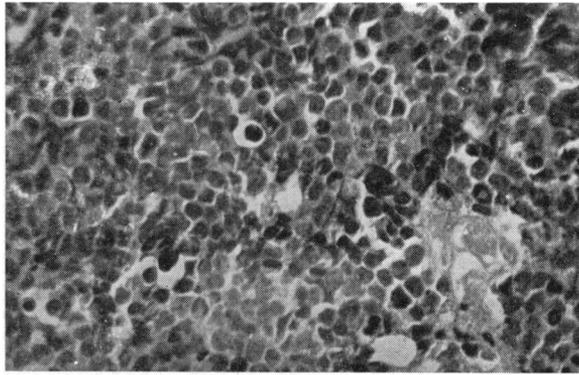


FIG. 4.—Biopsy of orbital swelling, showing cells characteristic of malignant lymphoma.  $\times 400$ .

Biopsy of the orbital swelling showed diffuse sheets of round to oval cells having scanty cytoplasm and large nuclei, some of which were oval-shaped and notched (Fig. 4), and characteristic of malignant lymphoma.

#### Discussion

Malignant lymphoma is a disease of the reticulo-endothelial system comprising two classes of cells—the intermitotic and the postmitotic (Carter, 1956). The intermitotic group divides into daughter cells, some of which remain undifferentiated and divide into daughter cells as immature or parent cells, while the others proceed to maturation and give rise to leukopoietic cells which mature into leucocytes through blast stages. An arrest in differentiation at any immature stage with an increased rate of proliferation may give rise to lymphomata (Reese, 1963).

Multiple growths in cases of malignant lymphoma may result either from a pleuricentric origin or from dissemination through metastasis. Lymphoid tissue around the eye is mainly encountered in the conjunctiva and the lacrimal gland. It is at these sites, therefore, that lymphomatous tumours are most likely to develop (Reese, 1963). In our case the onset of the swelling near the outer canthus and the displacement of the eye ball downwards and medially suggests that it originated in the lacrimal gland. Leukaemia associated with malignant lymphoma is usually lymphocytic in type. In our case the presence of immature cells of the myeloid series and reticulocytes in the peripheral blood was interesting. The bone marrow examination showed no leukaemoid reaction. The most plausible explanation for this unusual finding seems to be a spilling of the bone marrow cells into the peripheral blood through metastasis and destruction of a number of the long flat bones normally responsible for haematopoiesis.

#### Summary

A case is reported of malignant lymphoma of the orbit (probably originating from the lacrimal gland) with generalized metastases.

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