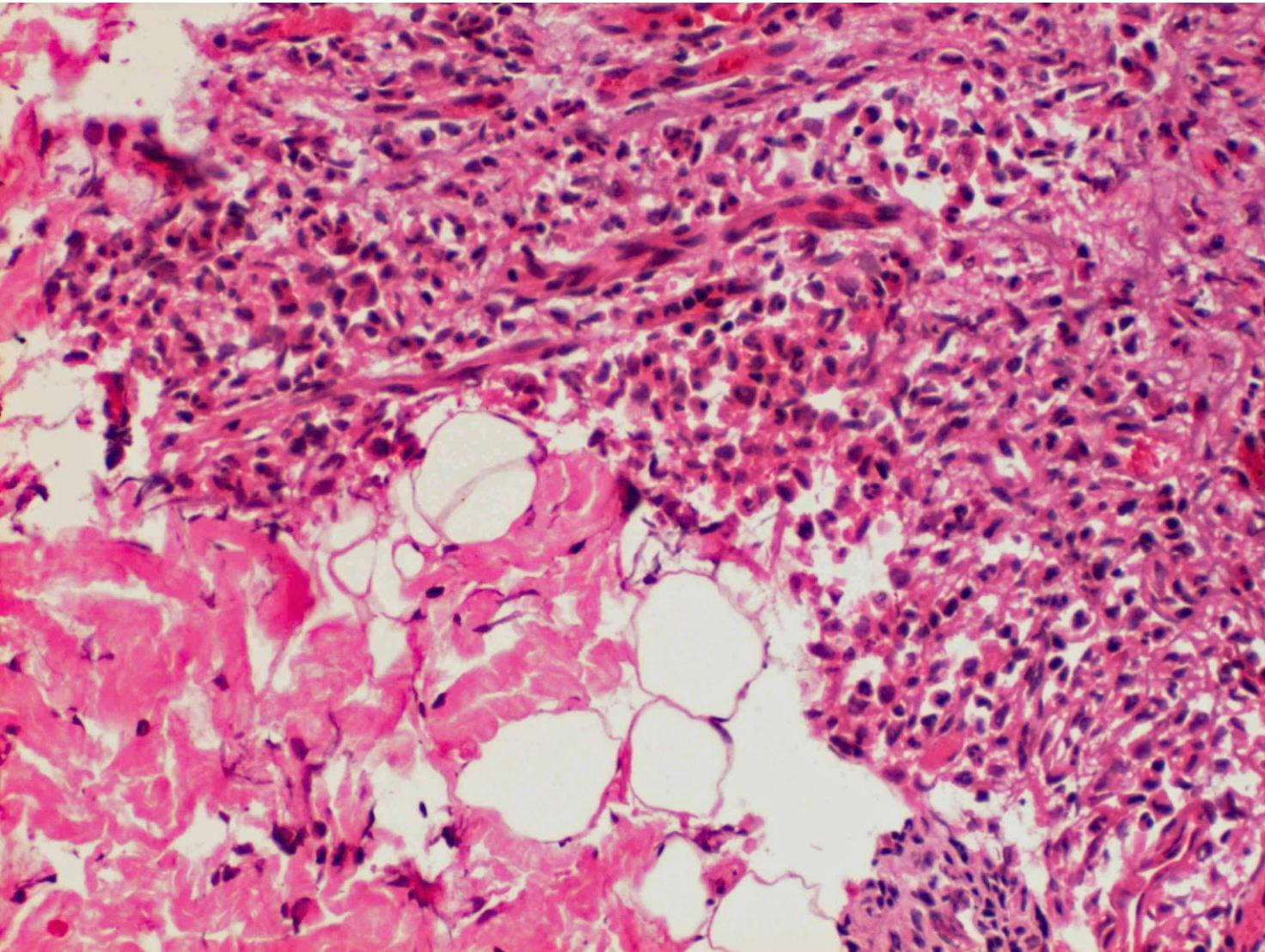


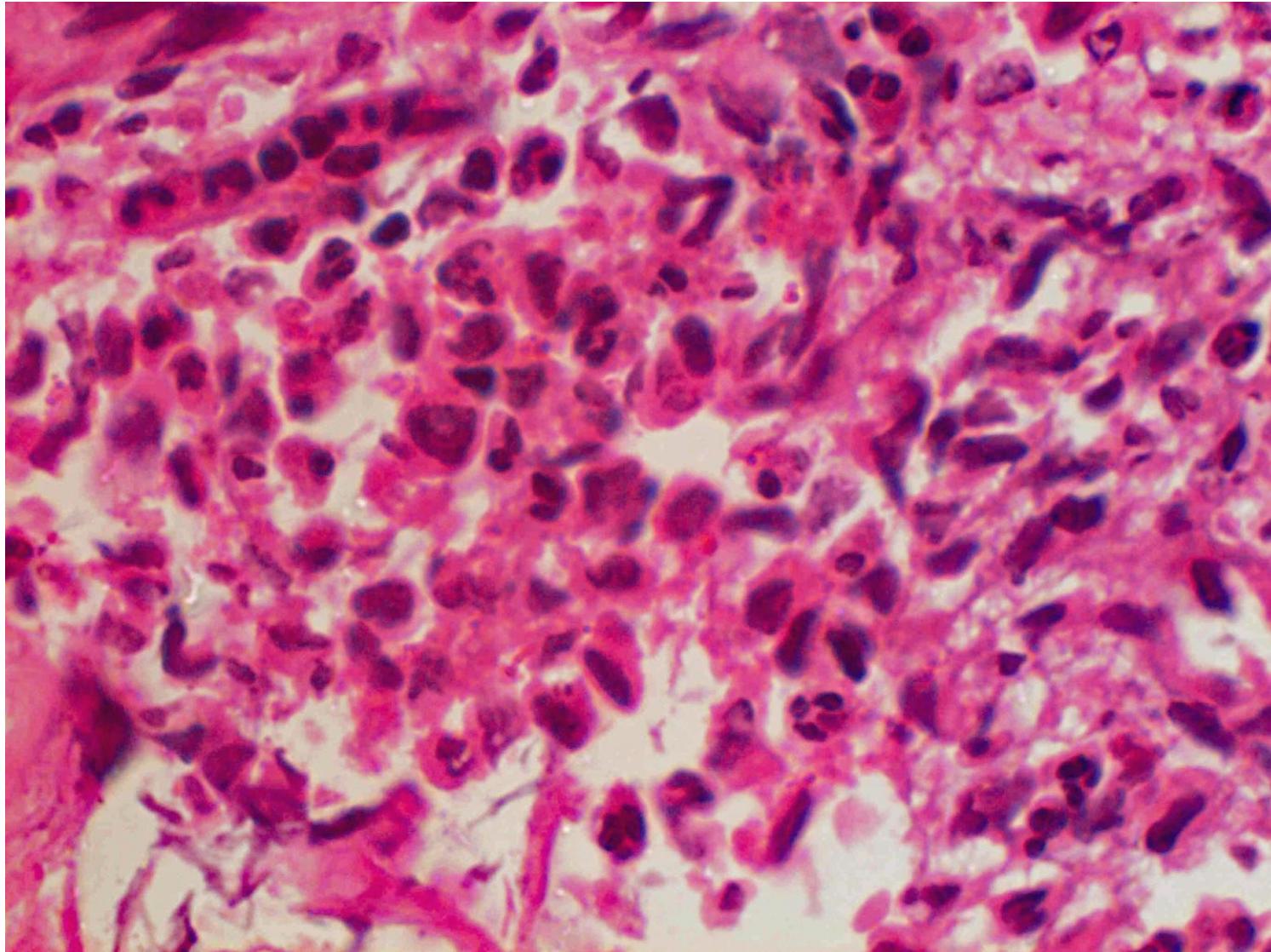
Hand-Schüller-Christian disease

Hand–Schüller–Christian disease (chronic multifocal Langerhans cell histiocytosis) can affect multiple organs. Traditional triad includes bulging eyes (exophthalmos), lytic bone lesions often involving the skull, and diabetes insipidus. Fever, weight loss, gum lesions and skin rashes may be associated. Mutations of the MAPKinase pathway are involved in the pathogenesis. Microscopically, the invasive growth of Langerhans histiocytes is associated with eosinophilic infiltration. The markers of Langerhans histiocytes include S-100 protein, CD1a, Langerin, CD68, CD45, CD4, BRAF-VE1, fascin and cyclin D1. Ultrastructurally, Birbeck granules can be seen in the cytoplasm.

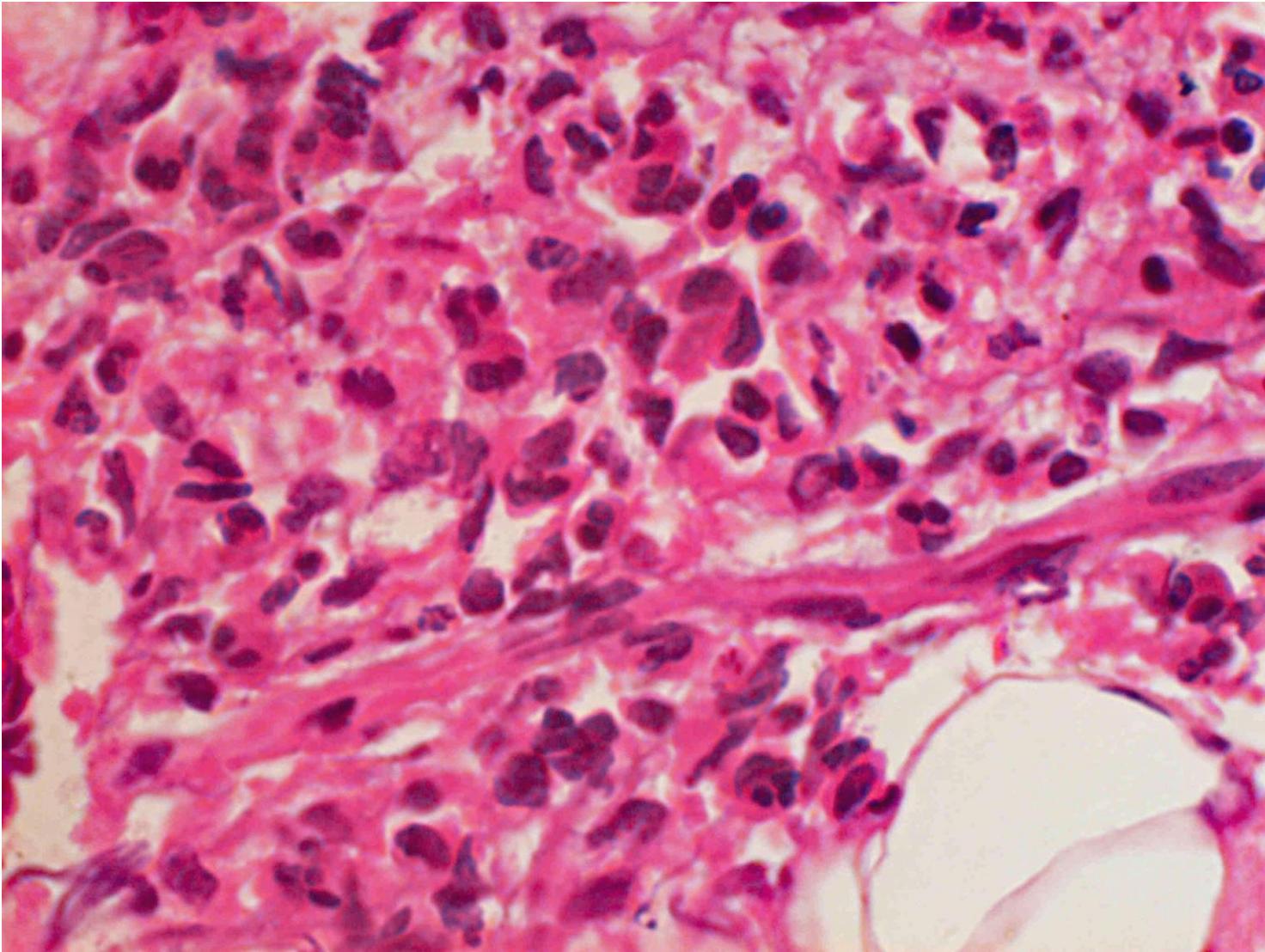
Ref.: Shanmugam V, Pozdnyakova O. Langerhans cell histiocytic neoplasms. PathologyOutlines.com website.2025.
<https://www.pathologyoutlines.com/topic/lymphnodeslch.html>



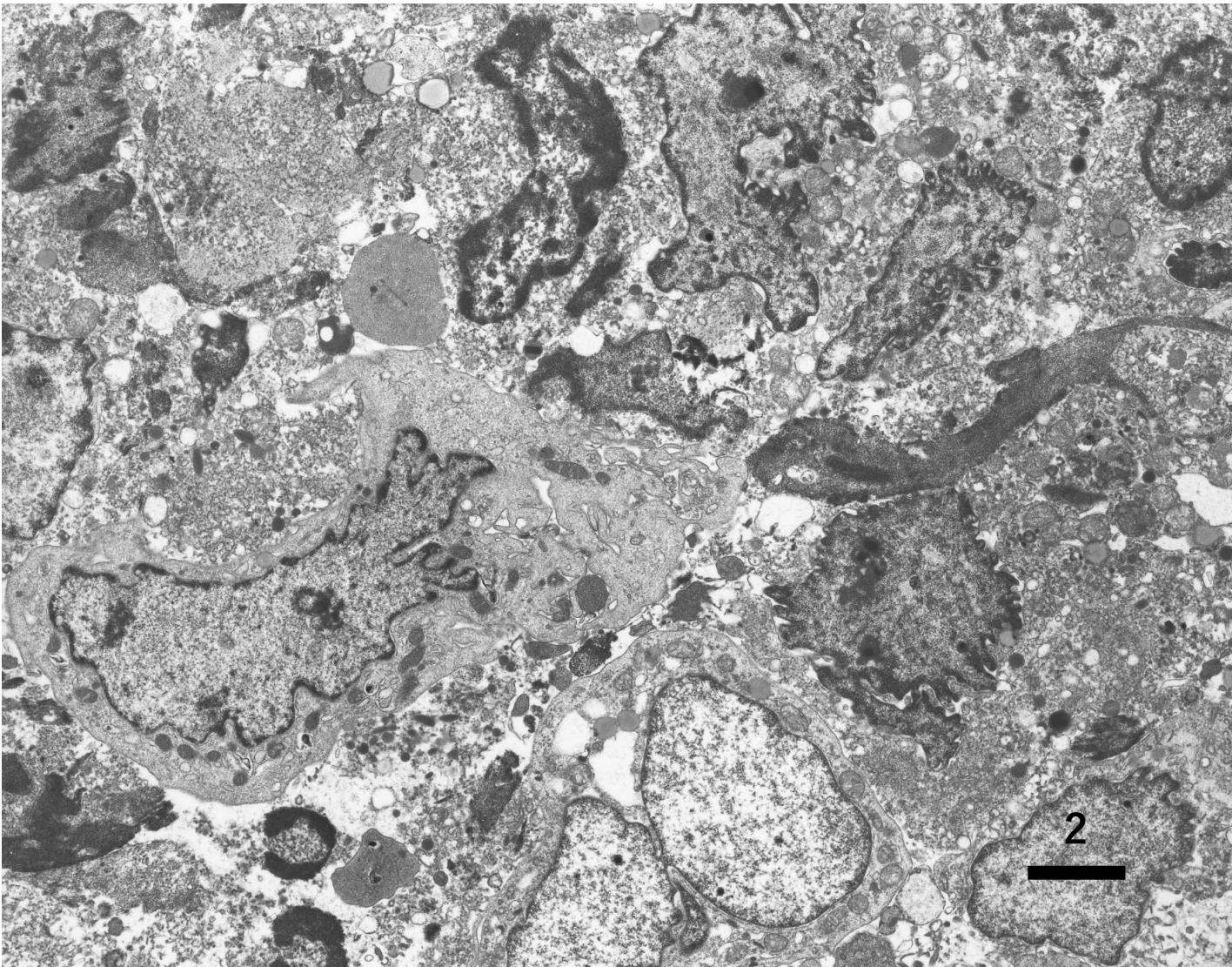
Hand–Schüller–Christian disease (Langerhans cell histiocytosis) involving the orbit seen in a newborn girl. Exophthalmos was the chief complaint. Biopsy reveals infiltration of histiocytic cells intermingled with eosinophils (H&E-1).



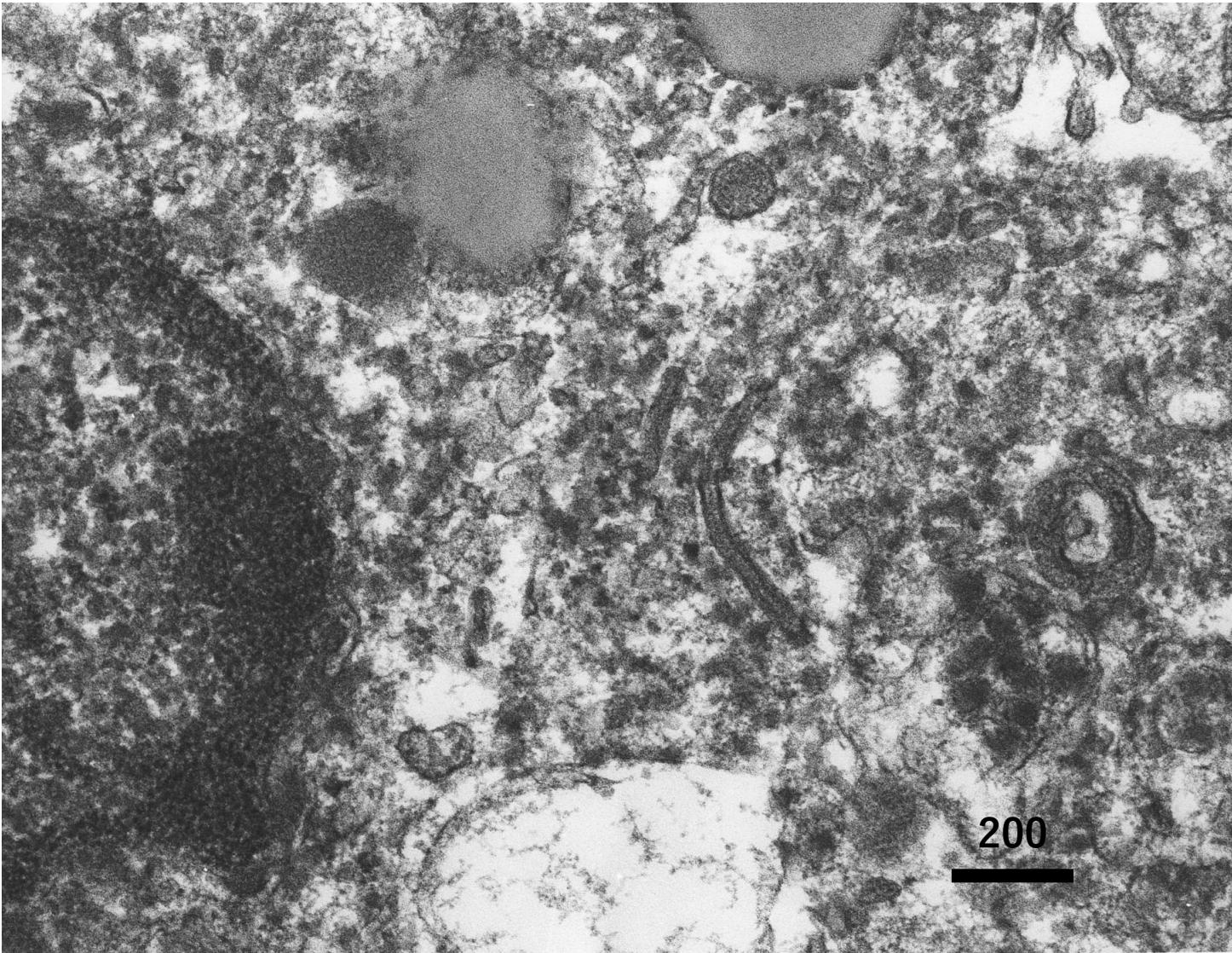
Hand–Schüller–Christian disease (Langerhans cell histiocytosis) involving the orbit seen in a newborn girl. Exophthalmos was the chief complaint. Biopsy reveals infiltration of histiocytic cells intermingled with eosinophils (H&E-2).



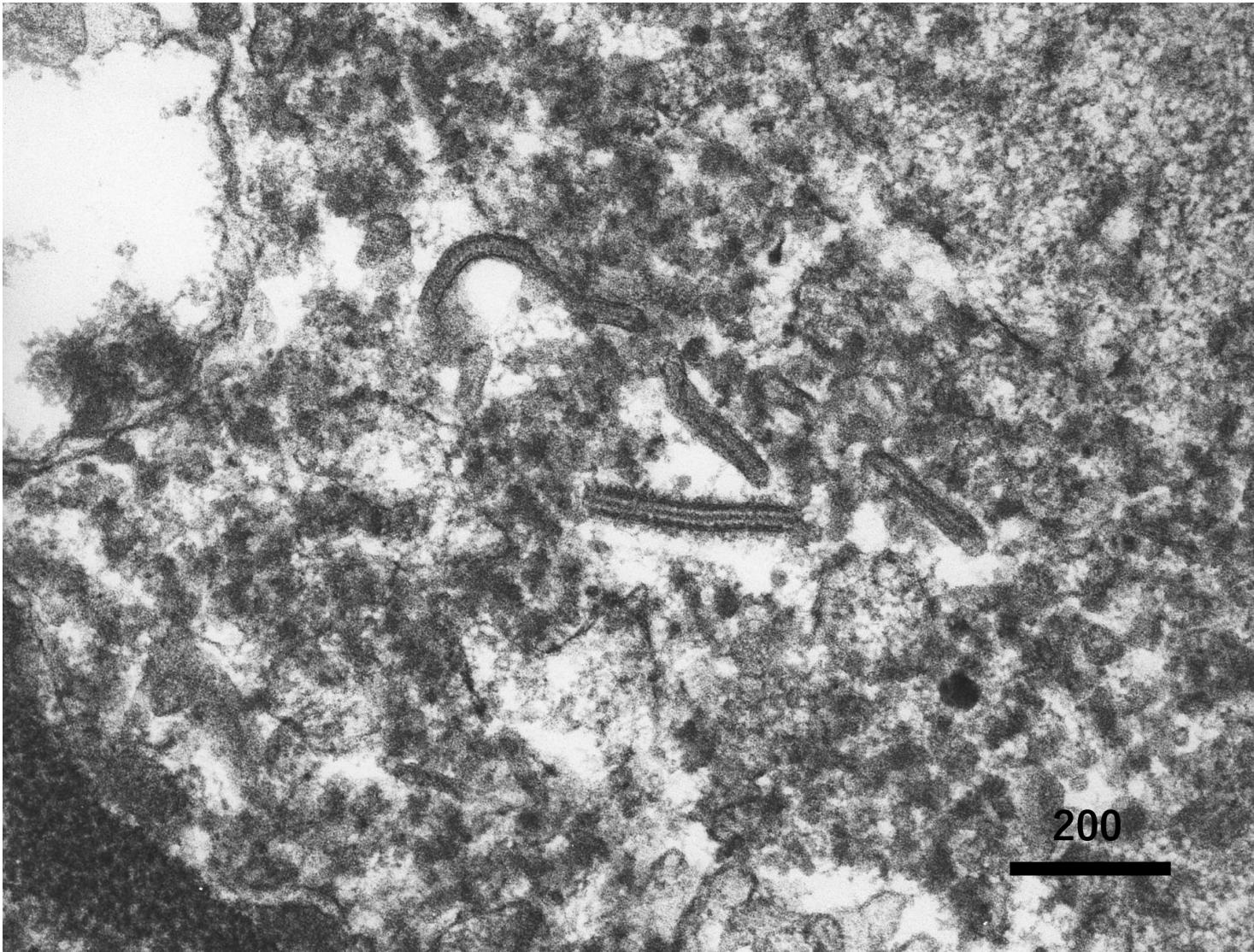
Hand–Schüller–Christian disease (Langerhans cell histiocytosis) involving the orbit seen in a newborn girl. Exophthalmos was the chief complaint. Biopsy reveals infiltration of histiocytic cells intermingled with eosinophils (H&E-3).



Ultrastructure of Hand–Schüller–Christian disease (Langerhans cell histiocytosis) involving the orbit seen in a newborn girl. Exophthalmos was the chief complaint. The histiocytic cells possess irregular-shaped nuclei and plump cytoplasm (TEM-1).



Ultrastructure of Hand–Schüller–Christian disease (Langerhans cell histiocytosis) involving the orbit seen in a newborn girl. Exophthalmos was the chief complaint. The histiocytic cells possess Birbeck granules in the cytoplasm (TEM-2).



Ultrastructure of Hand–Schüller–Christian disease (Langerhans cell histiocytosis) involving the orbit seen in a newborn girl. Exophthalmos was the chief complaint. The histiocytic cells possess Birbeck granules in the cytoplasm (TEM-3).