medication for AA, with the transdermal route not being described in the package insert, the authors suggest a cautious use of the drug, with laboratory monitoring and regular clinical evaluation.

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Authors' contributions

Bianca Lopes Nogueira: Design and planning of the study; collection, analysis and interpretation of data; drafting and editing of the manuscript and critical review of important intellectual content; critical review of the literature; approval of the final version of the manuscript.

Renan Rangel Bonamigo: Drafting and editing of the manuscript and critical review of important intellectual content; effective participation in research orientation; intellectual participation in the propaedeutic and/or therapeutic conduct of the studied cases; critical review of the literature; approval of the final version of the manuscript.

Renata Heck: Design and planning of the study; drafting and editing of the manuscript and critical review of important intellectual content; effective participation in research orientation; intellectual participation in the propaedeutic and/or therapeutic conduct of the studied cases; critical review of the literature; approval of the final version of the manuscript.

Conflicts of interest

None declared.

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Kaposiform hemangioendothelioma and tufted angioma: two entities of the same clinicopathological spectrum☆

Dear Editor,

kaposiform hemangioendothelioma (KHE) and tufted angioma (TA) are very rare vascular tumors[1]; however, they are associated with important morbidity and mortality.[2] Their clinical presentation is very heterogeneous and, especially in KHE, potential associated complications add difficulties to the management.[1,3]

A 28-day-old male infant, born at 33 weeks of gestation with a diagnosis of nonimmune *hydrops fetalis*, presented with an asymmetry of the right face, neck, and thorax after partial resolution of the generalized edema (Fig. 1A). On physical examination, an erythematous-bluish-purpuric vascular-like tumor extending from the right parotid and cervical area to the ipsilateral chest was observed. A diagnosis of KHE complicated with the kasabach-merritt phenomenon (KMP) was made through laboratory test results and magnetic resonance imaging (Fig. 1B). Intravenous treatment with vincristine, aspirin, ticlopidine and prednisone lead to the reduction in the size of the tumor and the improvement of the clinical condition.[3] Aspirin and ticlopidine were maintained without any recurrence, symptomatic, or laboratory abnormalities. However, several months after discontinuation due to vaccination, dark-red

☆ Study conducted at the Department of Dermatology and Venereology, Hospital General Universitario Gregorio Marañón, Universidad Complutense, Madrid, Spain.

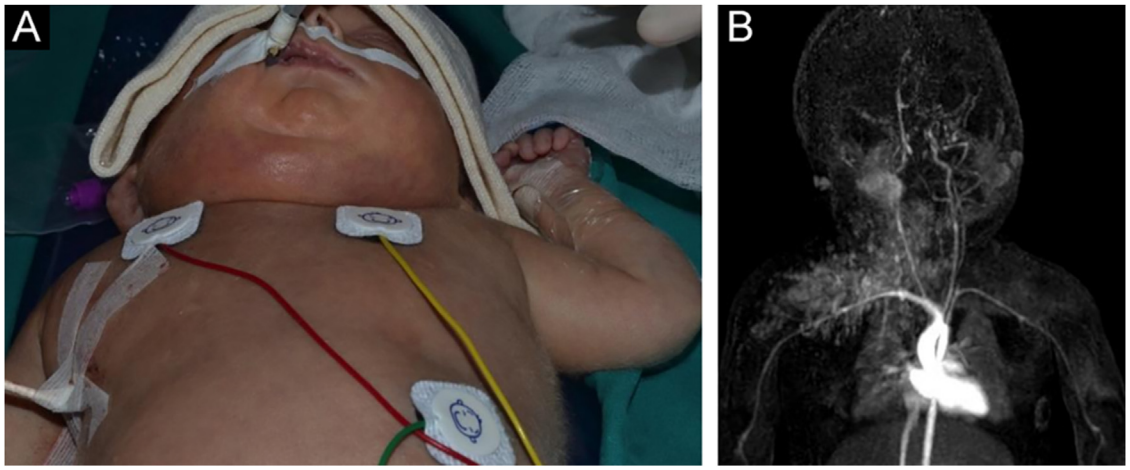

Figure 1 Clinical and radiological images of kaposiform hemangioendothelioma (KHE). (A) Clinical image at presentation: vascular-like lesion located at his right cervical area and chest. (B) Radiological image of a vascular tumor compatible with HEK with deep endocervical extension.

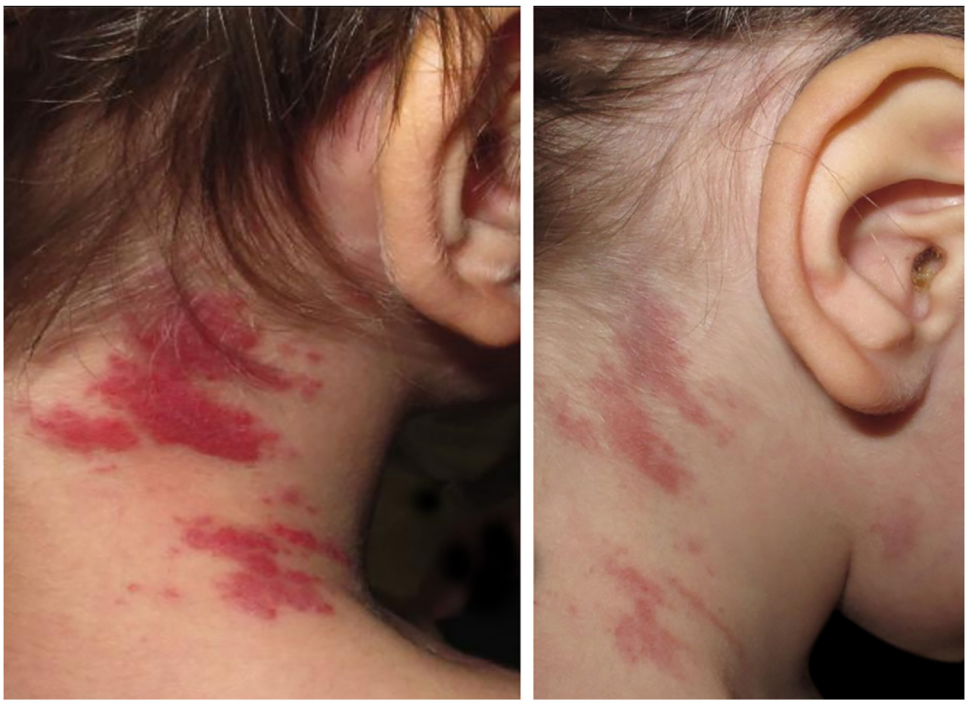

Figure 2 Clinical images of tufted angioma (TA) lesions. (A) Violaceous macules and plaques on the right lateral aspect of the neck at the age of two; first presentation of TA when discontinuation of aspirin and ticlopidine. (B) Partial clearance after reintroduction of aspirin in monotherapy.

and violaceous macules and plaques started to develop in the same location as prior HEK (Fig. 2).

Histopathological study from these lesions showed a vascular, well-defined nodular proliferation located in the papillary and medium dermis with a ''cannonball'' appearance. These nodules were formed by closely packed small vascular vessels lined with endothelial cells and pericytes; vascular spaces were present and some of them were located at the periphery, surrounding the nodules, with a semilunar/crescent-shaped morphology (Fig. 3). No mitotic figures, atypical cells or changes at the epidermis were present. An immunohistochemistry panel was also performed, and a diagnosis of TA was made. Aspirin was then reintroduced with clinical control and partial clearance (Fig. 2). New flares at the same location have been experienced when discontinuing aspirin, with complete control after reintroduction.

HEK and TA are vascular tumors with aggressive and intermediate behavior, respectively.[1–3] Regarding complications, KMP is the most severe. Both entities share clinical, histopathological, and molecular features (GNA14 mutations); therefore, it has been suggested to be two polar ends

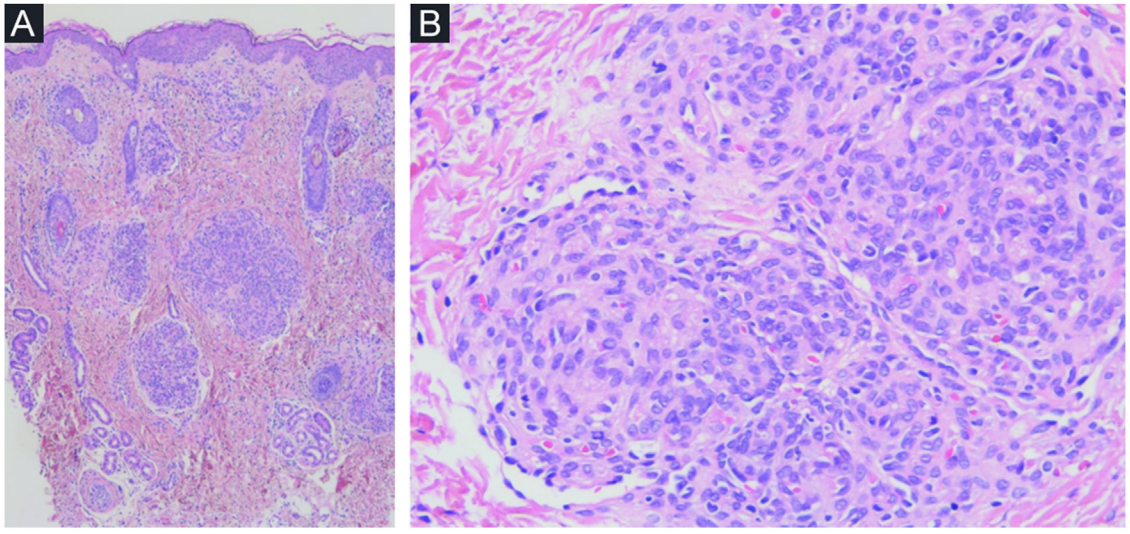

Figure 3 Histopathological features of tufted angioma (TA). (A) Vascular proliferation in the papillary and medium dermis; nodules were composed of tufted vascular vessels lined with endothelial cells. These endothelial cells were fVIII, CD31 and CD34 positive (podoplanin negative). (B) These nodules were surrounded at the periphery by semilunar vascular spaces (podoplanin positive).

of the same spectrum.[2] TA usually presents during infancy or early childhood with non-aggressive behavior.[2,4] Purpuric, dark red or brownish macules, papules and plaques are characteristic, although a deep nodular component or extension to the trunk and elbow can be observed.[1,2] The presence of dermal tufts of vessels in a cannonball pattern is pathognomonic (Fig. 3).[4]

Although recommended, histopathological studies can be omitted in life-threatening cases.[4,5] Concerning treatment, non-complicated, early and asymptomatic TA cases may not benefit from treatment.[1,5] Systemic corticosteroids, intravenous vincristine, mTOR inhibitors, α-interferon and antiplatelet drugs have been used successfully in the treatment of KHE/TA.[5] VAT (Vincristin, Aspirin and Ticlopidine) therapy, as presented, has demonstrated its efficacy in cases of KHE/TA associated to KMP.[2] Sirolimus, an mTOR inhibitor, has demonstrated great results in complicated, non-complicated, and refractory cases of KHE/TA.[1,2,5]

In conclusion, the authors present a case of neonatal KEH complicated with KMP, successfully treated with VAT therapy with posterior development of TA. TA relapses were experienced when discontinuing aspirin, with complete control after reintroduction in monotherapy.

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Authors' contributions

Lula María Nieto-Benito and Minia Campos-Domínguez conceived and designed the study, collected the data, and wrote and reviewed the paper. Jorge Huerta-Aragonés and Verónica Parra-Blanco conceived the study and reviewed the paper.

Conflicts of interest

None declared.

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Langerhans cell histiocytosis: a rare case of the multisystemic form in an infant☆

Dear Editor,

Langerhans cell histiocytosis (LCH) is an inflammatory neoplasm of myeloid precursor cells, in which there is an accumulation of specialized dendritic cells in different organs.[1] This case report describes a rare case of LCH with a multisystemic presentation.

This case describes a two-month-old male patient, presenting erythematous-purpuric lesions scattered throughout the body since birth. After a short period of apparent improvement, the lesions recurred. There were no systemic manifestations.

On physical examination, angiomatous papules with hematic crusts on top and some flat, hypochromic, shiny papules were observed, also affecting the palmoplantar region and the oral cavity (Fig. 1).

Therefore, the diagnostic hypotheses of LCH, congenital cytomegalovirus (CMV), leukemia cutis, and severe combined immunodeficiency were suggested. A biopsy was performed, and serologies were requested (HIV, CMV, rubella, toxoplasmosis, VDRL) which were negative, whereas screening for congenital immunodeficiency showed no alterations.

Histopathology revealed chronic dermatitis associated with the presence of cells suggestive of Langerhans cells (Fig. 2). Immunohistochemistry showed positivity for CD1a, CD68, S100 protein; Ki67 was positive in 70% of the cells (Fig. 3). Once the diagnosis of LCH was confirmed, the investigation of other organs through a myelogram and computed tomography of the chest, abdomen, and pelvis led to the classification of the case as multisystemic LCH due to pulmonary and hepatic involvement. Treatment was started with weekly vinblastine 3 mg/m^2 + prednisone 20 mg/m^2, according to the *Brazilian Society of Histiocytosis* guideline. The condition improved significantly, but after about two months the skin lesions returned, and the pulmonary condition worsened, requiring oxygen therapy. A new chemotherapy regimen with Cladribine (2-CdA) was introduced, according to the Japanese protocol. The patient remains stable and is being followed by the oncology team.

The incidence of LCH ranges from two to nine cases per million children under 15 years of age, with a peak between one and three years of age.[2] It can affect one or multiple organs, with the following being considered at risk: liver, spleen, and bone marrow. Most patients have single-system involvement (70%).[1]

The most frequently affected organs are the bones, followed by the skin, but in infants, cutaneous manifestations are the main findings. Dermatologically, they present as a seborrheic-like dermatitis, and less often as hemorrhagic lesions, although these are favorable conducive to diagnosis.[3]

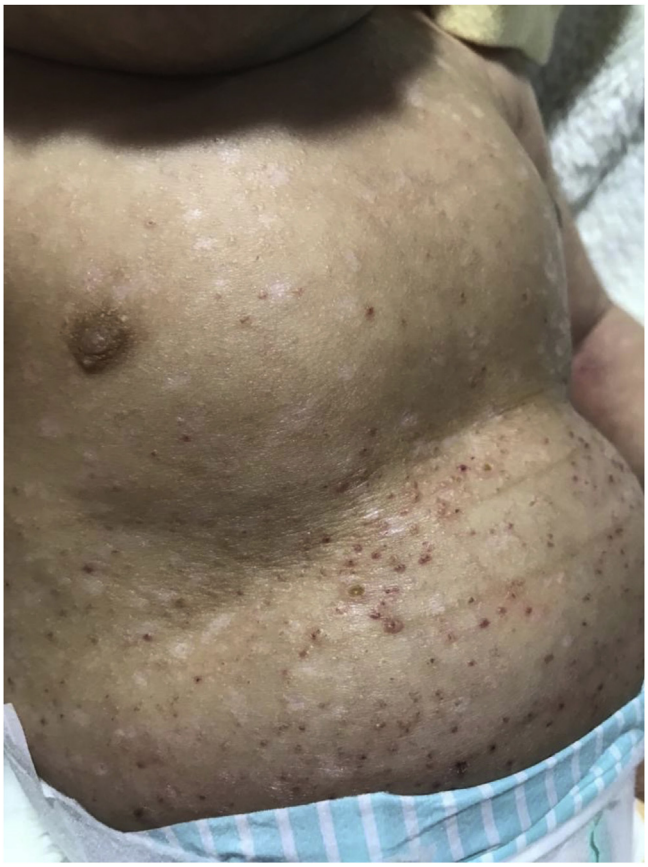

Figure 1 Angiomatous papules with hematic crusts on top and some flat, hypochromic papules, with a shiny appearance on the trunk.

☆ Study conducted at the Faculty of Medical and Health Sciences of Sorocaba, Pontifícia Universidade Católica de São Paulo, Sorocaba, SP, Brazil.