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Restrictive dermopathy with massive thrombosis - a previously unrecognized finding?

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Restrictive dermopathy (RD) is a lethal genodermatosis characterized by IUGR, tight and rigid skin, prominent superficial vasculature, epidermal hyperkeratosis, typical facial features, sparse/absent eyelashes and eyebrows, thin dysplastic clavicles, pulmonary hypoplasia and arthrogryposis. It is caused by LMNA or, more frequently, ZMPSTE24 mutations. We report 2 siblings with RD and ZMPSTE24 mutations. **CASE REPORT:** The mother is 28y G2P1. The couple was 1st cousin of Pakistani origin. Family history was unremarkable. The 1st pregnancy resulted in IUD at 27w, preceded by decreased fetal movement, oligohydramnios and IUGR at 24w. Autopsy was inconclusive and G-banding was not possible. Placenta showed chronic deciduitis, subchorionic hematoma and fetal thrombotic vasculopathy. The 2nd pregnancy was complicated with GDM treated with insulin. She was also on heparin for previous miscarriage. IPS was negative. Serial ultrasounds were normal. She had decreased fetal movement with poor biophysical profile at 28w and delivered a stillborn by emergency CS. Autopsy revealed absent eyelashes, sparse eyebrows, flat nasal bridge with vertical indentation, poorly defined alae nasi, thin and poorly defined philtrum, protruding tongue, retrognathia with a midline cleft chin. The skin was pink and had tight shiny texture. There were severe multiple flexion contractures with fixed thumbs, camptodactyly, absent distal IP creases and dorsiflexed feet. Skeletal survey showed hypoplastic clavicle and scapulae. Internal examination showed left adrenal infarction with propagation of thrombus obstructing the IVC, organizing venous thrombi in the contralateral kidney, and acute microthrombi in the brain. Bilateral perinephric and germinal matrix haematoma were noted. Chromosome analysis showed 46, XY. Skin histology was consistent with RD. Sequencing of the ZMPSTE24 gene showed a homozygous mutation resulting in premature protein termination, p.Glu237Stop. **DISCUSSION:** Coagulopathy is not well described in RD. From literature review, only 1 case showed evidence of coagulopathy with lenticulostriate vasculopathy and multiple old, calcified, organized thrombi and intimal fibrosis in the abdominal aorta [Chiang, et al, 2008]. Further studies are required to see if the coagulopathy in RD is the result of vasculopathy or platelet abnormalities and may provide further insights into the function of ZMPSTE24 in coagulation.