

A microRNA signature for infantile hemangioma

September 8 2016

Infantile hemangiomas (IH) are benign vascular tumors occurring in 4-5% of infants. These tumors resolve spontaneously or in response to propranolol treatment; however, they resemble other vascular anomalies and cannot be definitively diagnosed without biopsy.

In this issue of *JCI Insight*, Jonathan Perkins of University of Washington and colleagues analyzed IH [tumor](#) tissue, IH patient [plasma](#), and non-IH vascular anomalies to identify a set of microRNAs that are specific for IH. MicroRNAs are small RNA molecules that do not encode [genes](#), but instead regulate the expression of other genes.

The IH-specific set of microRNAs, known as C19MC, was specifically upregulated in IH tumor cells and was also detectable in IH patient plasma. Importantly, circulating C19MC microRNAs decreased in parallel with IH tumor regression, but rebounded with tumor re-growth.

These results suggest that plasma C19MC microRNAs could be used to diagnose and monitor IH treatment. Additionally, C19MC microRNAs may be important in IH pathogenesis, as their known targets include genes encoding inhibitors of cell growth and proliferation.

More information: Graham M. Strub et al, Endothelial and circulating C19MC microRNAs are biomarkers of infantile hemangioma, *JCI Insight* (2016). [DOI: 10.1172/jci.insight.88856](https://doi.org/10.1172/jci.insight.88856)

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Citation: A microRNA signature for infantile hemangioma (2016, September 8) retrieved 27 April 2024 from

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