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Oral Propranolol for Infantile Hemangiomas

The surprising observation that oral administration of the beta-blocker propranolol (Inderal, and others) can stop the growth and rapidly cause the involution of disfiguring or life-threatening infantile hemangiomas1 has quickly led to a series of confirmatory observations and now a controlled trial. The mechanism of this effect is not known, but is thought to be related to down-regulation of the RAF mitogen-activated protein kinase signaling pathway resulting in inhibition of vascular endothelial growth factor (VEGF) and apoptosis in capillary endothelial cells. The response of infantile hemangiomas to propranolol, which may be detectable within a day, has been similar regardless of the age of the child or the location or depth of the lesion.2 A randomized controlled trial in 40 children 9 weeks to 5 years old with primarily facial hemangiomas compared propranolol 2 mg/kg/day to a placebo, each given in 3 divided doses, for 6 months. Propranolol was significantly more effective in reducing the volume, redness and elevation of the lesions. No significant hypoglycemia, hypotension or bradycardia occurred.3