



Effective Health Care

Strategies to Treat and Manage Infantile Hemangioma

Nomination Summary Document

Results of Topic Selection Process & Next Steps

- The topic, *Strategies to treat and manage infantile hemangioma*, will go forward for refinement as a systematic review. The scope of this topic, including populations, interventions, comparators, and outcomes, will be further developed in the refinement phase.
- When key questions have been drafted, they will be posted on the AHRQ Web site and open for public comment. To sign up for notification when this and other Effective Health Care (EHC) Program topics are posted for public comment, please go to <http://effectivehealthcare.ahrq.gov/index.cfm/join-the-email-list1/>.

Topic Description

Nominator(s): Organization

Nomination Summary: This topic was identified as a priority for a systematic review by a professional organization interested in guideline development. The nominator is concerned that there is insufficient clarity regarding the proper management and treatment of infantile hemangiomas. A review of the evidence on the treatment and management of infantile hemangiomas as related to referrals, imaging, laser treatment, and medical therapy will aid in the development of clear clinical guidance.

PICO for Key Question #1

Population(s): Children with infantile hemangiomas

Intervention(s): Early referral

Comparator(s): Delayed referral

Outcome(s): Minimization of functional impairment and/or cosmetic deformity

PICO for Key Question #2

Population(s): Children with infantile hemangiomas

Intervention(s): Imaging by use of magnetic resonance imaging (MRI), computed tomography (CT), or ultrasound

Comparator(s): No use of imaging

Outcome(s): Accuracy of diagnosis, identification of complications or potential complications

PICO for Key Question #3

Population(s): Children with infantile hemangiomas

Intervention(s): Pulsed dye laser treatment
Comparator(s): Observation
Outcome(s): Healing of ulceration and/or pain reduction, minimization of cosmetic deformity, enhancement of infantile hemangioma involution, safety

PICO for Key Question #4

Population(s): Children with infantile hemangiomas
Intervention(s): Systemic (enteral) medical therapy using beta-blockers (e.g., propranolol, timolol)
Comparator(s): Systemic (enteral) medical therapy using corticosteroids, medical therapy using cytostatic drugs (e.g., vincristine), medical therapy using immuno-modulators (e.g., imiquimod), medical therapy using angiotensin-converting enzyme inhibitors (e.g., captopril), observation
Outcome(s): Minimization of functional impairment and/or cosmetic deformity, enhancement of infantile hemangioma involution, safety

Key Questions from Nominator:

1. What is the evidence of difference in outcomes of infantile hemangioma patients referred early versus those for whom referral may have been delayed or not recommended?
2. What is the comparative safety and effectiveness of imaging to that of no imaging in the diagnosis of infantile hemangioma?
3. What is the comparative safety and effectiveness of pulsed dye laser treatment of infantile hemangioma to that of no treatment?
4. What is the comparative safety and effectiveness of beta-blockers to treat infantile hemangioma as compared to other medical interventions, including corticosteroids, cytostatic drugs, immuno-modulators, angiotensin-converting enzyme inhibitors, and observation?

Considerations

- The topic meets all EHC Program selection criteria. (For more information, see <http://effectivehealthcare.ahrq.gov/index.cfm/submit-a-suggestion-for-research/how-are-research-topics-chosen/>.)
- Infantile hemangioma is the most frequent tumor of childhood, yet there is no clinical guideline addressing the management and treatment of the condition. The lack of guidance on the condition is reflected in the variation in clinical practice. There are multiple options for the management of infantile hemangioma, including observation, imaging, early referral to a specialist, treatment with pulsed-dye lasers, and medical therapy. Determination of the appropriate management of the tumor may depend in part on the location of the hemangioma as well as likelihood of involution if left untreated.
- There were a number of recent studies on interventions such as laser treatment and medical therapy to warrant an AHRQ systematic review at this time.