Propranolol associated with improvement in size and color of head and neck hemangiomas in children

May 16 2011

The beta-blocker propranolol appears to be associated with reducing the size and color of hemangiomas of the head and neck in a pediatric population, according to a report in the May issue of *Archives of Otolaryngology–Head and Neck Surgery*.

According to background information in the article, hemangiomas are tumors that appear by the age of 2 months, affecting up to 10 percent of full-term white infants. These lesions can be benign, or can affect functions such as the ability to see or on occasion can be life-threatening if they occur in areas such as airways. Although 70 percent of infantile hemangiomas regress by age 7 years, they may leave behind scars or fibrous fatty tissue. Oral corticosteroids have long been the treatment of choice for this condition, although they may be associated with some significant adverse effects. Three years ago, researchers learned that propranolol could serve as a treatment for hemangiomas in babies, and formal studies of the drug were then launched.

Carine Fuchsmann, M.D., from Hospices Civils de Lyon in Bron , France and colleagues reviewed the records of 39 children treated with propranolol for head and neck hemangiomas that had complications, threatened function or appearance or occurred in life-threatening locations. The assessment included clinical examinations, photographs, and echographic evaluations of the tumors. In 16 patients, previous treatment was either unsuccessful or associated with relapses.

In 37 of the hemangiomas, propranolol therapy was associated with improvement within two weeks. Overall, the authors note, "improvement was not only in the size but also in the quality of the lesion, which flattened and changed color." This included 26 tumors that would not otherwise have been appropriate for treatment with corticosteroids. In six cases, following treatment the tumors recurred, but another course of the drug was effective. Five patients were switched to another beta-blocker due to sleep disturbances.

The authors point out that in some patients the drug may be better tolerated than corticosteroids, and that it can be particularly helpful for "treatment of hemangiomas in locations that previously did not benefit from medical therapy because of possible adverse effects." They call for further studies to establish dosing and treatment-cessation protocols, and also to establish whether other beta-blockers can be acceptable substitutes.

More information: Arch Otolaryngol Head Neck Surg. 2011;137[5]:471-478.

Provided by JAMA and Archives Journals