Resistance Concerns Steer Acne Tx From Antibiotics to Retinoids

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SAN FRANCISCO — Prescribing has been gradually moving away from antimicrobial agents and toward increased use of retinoids in the treatment of acne vulgaris.

The shift toward nonantibiotics, reported in an analysis of national prescription habits between 1990 and 2002, may in part be explained by a growing awareness of antibiotic-resistant Propionibacterium acne, wrote Dr. Suganthi Thevarajah and her associates in a poster presentation at the annual meeting of the American Academy of Dermatology.

The first report of antibiotic resistance to cutaneous P. acne appeared in the late 1970s. The study showed that one in five U.S. patients treated with either topical erythromycin or clindamycin had resistant strains within in their pilosebaceous follicles, noted Dr. Thevarajah of Hospital Kuala Lumpur, Malaysia. Dr. Thevarajah led the study while at the Center for Dermatology Research, Wake Forest University, Winston-Salem, N.C.

The center is supported by a grant from Galderma Laboratories Inc., which markets tetracycline and other medications associated with benign intracranial hypertension, the investigators noted. A total of 73% of the 78,000 acne patients aged 13-50 in a large Northern California HMO. Fourteen percent had hypertension at baseline; this rate jumped to 90% during isotretinoin therapy. These real-world data were surprising, the Physicians’ Desk Reference gives the hypertensive side effect in isotretinoin clinical trials at 25%. The on-treatment incidence of triglyceride levels in excess of 5,000 mg/dL was 0.07% in the EFMO study, with no values as high as 5,000 mg/dL.

Elevated triglyceride levels were present in 5% of subjects prior to treatment and in 14% at some point during isotretinoin therapy, with 88% of on-treatment elevations being mild.

Acute pancreatitis. There are only four published cases of what is believed to be isotretinoin-induced pancreatitis. All four involved overweight or obese women, two in their 40s. Two had triglyceride levels over 5,000 mg/dL at onset. One woman had a history of gallbladder disease. Another was on replacement estrogen, which is known to have a strong association with acute pancreatitis.

Benign intracranial hypertension. In 179 reports of isotretinoin-associated benign intracranial hypertension, 24 reports involved prior or simultaneous use of tetracyclines. Mean time from isotretinoin exposure to diagnosis was 2.3 months. Symptoms cleared in 48% of patients upon stopping isotretinoin.

Based on the relatively quick onset of pseudotumor cerebri following isotretinoin exposure, the limited number of documented positive rechallenges, and the fact that hypertension A is a known cause, the investigators concluded that “it seems certain that there is a direct correlation between isotretinoin use and benign intracranial hypertension” (Ophthalmology 2004;111:1248-50).

Dr. Zane noted that neuro-ophthalmologic recommendations call for discontinuation of isotretinoin and a work-up for intracranial hypertension in patients who develop headache or unexplained blurred vision, along with avoidance of concomitant vitamin A, as well as tetracyclines and other medications associated with benign intracranial hypertension.

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