

Aldosterone Blockers Lower BP in Obese Patients

BY MITCHEL L. ZOLER

NEW YORK — Two aldosterone receptor-blocking drugs—spironolactone and eplerenone—have almost overnight become important, second-line antihypertensive drugs for obese patients.

“Aldosterone receptor blockers were never on the list [of major antihypertensive drug choices], and now [they’re] listed as fourth line, but for me, in the

subgroup of obese patients, [they’re] second line,” Dr. George L. Bakris said in an interview at a meeting sponsored by the American Diabetes Association.

“In obese patients I’ll start them on a couple of drugs but [if they remain above their goal blood pressure], the second or certainly the third drug will be an aldosterone receptor blocker,” said Dr. Bakris, who is a professor of medicine and the director of the hypertensive dis-

eases unit at the University of Chicago.

His most common choice is spironolactone, administered at the relatively low dosage of 25 mg b.i.d. At this low level gynecomastia—a common adverse effect of the drug—usually doesn’t occur, he said.

An alternative is to use eplerenone, which causes an even lower level of gynecomastia but also costs more than spironolactone, even though eplerenone

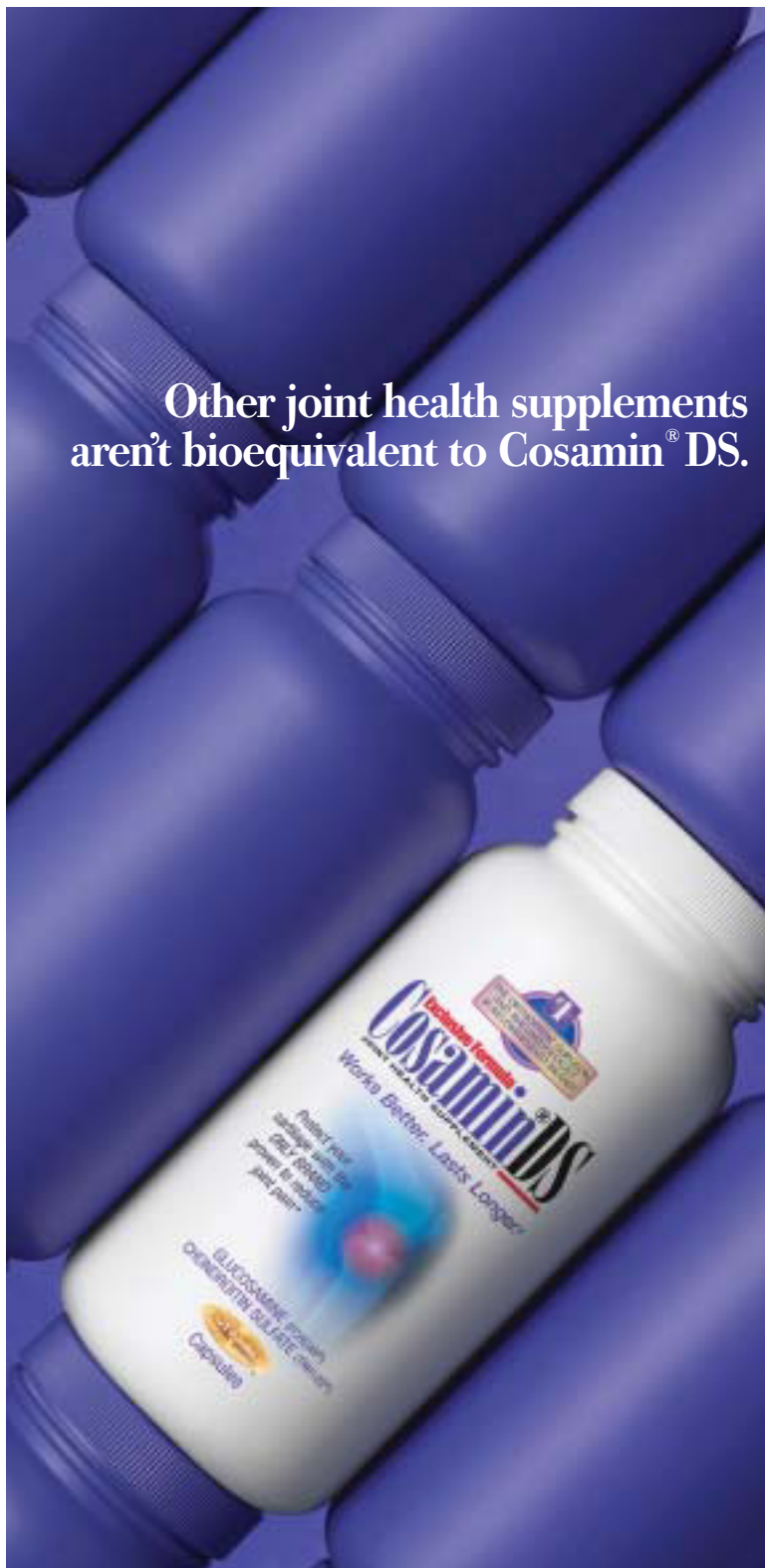
is now available as a generic formulation.

With this treatment, Dr. Bakris said he has seen some obese patients respond with a systolic blood pressure reduction of more than 20 mm Hg. The treatment can also help resolve the mild hypokalemia that these patients may have because of an unusual form of a mild, secondary hyperaldosteronism that they develop because of their obesity.

In fact, aldosterone receptor blockers were first used in patients of this sort in the early 2000s at the University of Alabama specifically to treat their hypokalemia.

Dr. David A. Calhoun and his colleagues, who did this work, found that the treatment also led to huge blood pressure reductions, Dr. Bakris said (*Am. J. Hypertens.* 2003;16[pt.1]:925-30).

Subsequent basic sciences studies have determined what’s going on. Sub-



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DR. BAKRIS

cutaneous adipocytes are not simply passive fat stores but function as a “miniendocrine organ,” releasing a variety of enzymes called adipokines. A series of adipokine-triggered enzymes activate angiotensin II release and boost the sensitivity of adrenocortical cells, triggering aldosterone secretion and producing the mild hyperaldosteronism state, he explained (*Int. J. Obesity* 2007;31:1605-16).

This condition can occur in people with a body mass index of 30 kg/m² or higher, although it seems like the higher the body mass index, the more common the condition becomes. In these patients another frequent consequence of obesity is sleep apnea, which itself causes a dramatic increase in blood pressure that may be very responsive to treatment with continuous positive airway pressure.

A role for aldosterone receptor blockade in treating hypertension in obese patients began to appear recently in expert guidelines, such as a position paper on treating hypertension in patients with diabetes from the American Society of Hypertension that was published last September (*J. Clin. Hypertens.* 2008;10:707-13).

Dr. Bakris also said it is possible that adipocyte-triggered hyperaldosteronism and hypertension might even appear occasionally in leaner individuals. “I don’t think it’s necessarily the amount of fat, but the company it keeps—the metabolic milieu. How the patient got these cells is the key, and right now we don’t know the details,” he said. ■

 A related video is at www.youtube.com/InternalMedicineNews (search for 64673).

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