Obesity and medications

Interview with Dr. Arya Sharma
from the McMaster University,
Hamilton, ON, Canada
Conducted by Dr. Patrick J. Mulrow

Obesity is a major risk factor for the development of hypertension, diabetes mellitus, and dyslipidemia. Weight reduction by dieting, of course, is the first approach in the management of obesity, but many patients are unsuccessful in losing weight and maintaining weight loss by dieting. They keep asking for help from a pill, but physicians are reluctant to treat with medications. Why is this so?

Dr. Sharma: There are three main reasons for this: First, most physicians still believe that obesity is not a medical condition that requires medical attention. Second, there is still a widespread misconception that obesity can be largely managed by lifestyle modification alone, and third, the history of antiobesity medication has been fraught with adverse effects ranging from addiction to pulmonary hypertension and/or cardiac valvular abnormalities. Thus, the vast majority of physicians remain skeptical regarding the use of medication, despite newer, safer medications that have recently become available.

Are these medications for short-term use or long-term use?

Dr. Sharma: Obesity, like hypertension, is a chronic medical condition. In the same manner in which exposure of susceptible individuals to an unhealthy lifestyle promotes the development of hypertension, lifestyle modification alone, through education and support, can promote weight loss and weight maintenance. Most antiobesity medications are for short-term use, typically six months to one year, with longer term use under strict medical supervision.

Battling the Hypertension & Obesity Epidemic by starting early in life – Recent data from the Philippine Society of Hypertension (PSH)

In a nationwide survey of the Philippine Association of the Study of Obesity & Overweight (PASOO), obesity was detected in 21% of patients consulting in medical clinics. In the area of metropolitan Manila (international cuisine), Luzon (rice staple food), Visayas (corn staple food) and Mindanao (Muslim food), obesity prevalence was 19%, 34%, 22% and 8%, respectively. Among 8 to 10 year old children enrolled in private schools, obesity prevalence was 23%.

In a 1999 randomized nationwide survey, national hypertension prevalence was 21.7% and obesity 4%. In a pilot provincial study conducted by the PSH among urban and rural elementary, high school and collegiate students, knowledge concerning the health risks of smoking, obesity, lack of exercise and excess fat intake was similar. In another interview involving elementary school pupils, 35% considered the father, mother and siblings to be obese and 60% stated that the fathers and 70% of mothers...
ment of “essential” hypertension, susceptible individuals exposed to our current “obesigenic” environment will experience weight gain. As for hypertension, pharmacological management of obesity also requires medications that can be safely and effectively used in long-term management. Only recently has data become available supporting the long-term use of newer antiobesity medications.

► Which drugs on the market are available for long-term use, and how much weight loss can be expected?

**Dr. Sharma:** Currently orlistat (Xenical®), a gastrointestinal lipase inhibitor that decreases fat absorption, and sibutramine (Reductil®, Meridia®), a centrally active serotonine and norepinephrine reuptake inhibitor, are licensed in most countries for the treatment of obesity for periods up to one year. When used with lifestyle modification, both drugs will result in a 5 to 10% weight loss in 50 to 60% of treated patients. Importantly, a substantial proportion of this weight loss can be maintained over the duration of treatment, something that most patients will not achieve with lifestyle counseling alone.

► Which obese patients are candidates for pharmacologic treatment? Are there special occasions to use these drugs for short periods of time?

**Dr. Sharma:** Current guidelines recommend the use of pharmacological treatment in patients with a body mass index (BMI) >30 or in those with a BMI > 27 with important obesity related comorbidities such as hypertension, diabetes, or dyslipidemia, in whom weight reduction by lifestyle management alone has not proved successful. As weight gain is often sporadic (e.g., during festive seasons, or following nicotine cessation), there may be a place for periodic or intermittent use of antiobesity medications in some individuals. Such intermittent use of antiobesity medication, however, has yet to be seriously addressed in long-term studies.

► When should you not use these drugs?

**Dr. Sharma:** These drugs are not recommended for “cosmetic” indications, in pregnant or nursing women, or in individuals with specific contraindications to their respective use. Orlistat will not be effective in patients in whom most calories come from non-fat sources (e.g., soft drinks, alcohol). Sibutramine should not be used together with monoamine oxidase (MAO) inhibitors or other centrally active drugs.

► What are the side effects of these drugs and how often do the side effects force patients to discontinue the drug?

**Dr. Sharma:** The side effects of both drugs are explained by their respective modes of action. Orlistat interferes with lipid digestion resulting in gastrointestinal symptoms like steatorrhea with oily discharge. It may also lead to a loss of lipid-soluble vitamins (ADEK), which may require substitution in some individuals. Sibutramine can increase heart rate and blood pressure in some patients and should therefore not be used in patients with uncontrolled hypertension, ischemic heart disease, stroke, or congestive heart failure. Other side effects of sibutramine include dry mouth, insomnia, and constipation. Discontinuation rates with both drugs are rather high (40–50% at one year), but is also related to the high cost and the unfulfilled (unrealistic) expectations of patients regarding the weight loss that can be achieved with these medications.

► Is a combination of drugs more efficacious than a single drug?

**Dr. Sharma:** Despite their different modes of action, combination of orlistat and sibutramine produces only modest additional weight loss. Combination of these drugs is, therefore, not recommended.

► How should one monitor the patients when they are on these medications?

**Dr. Sharma:** Under both medications, patients should be advised to maintain a well-balanced diet and increase their level of physical activity. Some patients on orlistat may require vitamin supplements. Patients on sibutramine must be regularly monitored for increases in blood pressure and heart rate.

► Can these drugs be used in children and adolescents?

**Dr. Sharma:** Currently, data on the use of these medications in children and adolescents is limited and, therefore, they are currently not recommended in these individuals.

► Are there other health benefits besides weight loss from the use of these drugs?

**Dr. Sharma:** Weight loss with both drugs can result in a substantial improvement in comorbidi-
ties including diabetes or dyslipidemia. Weight loss will also reduce blood pressure in patients treated with orlistat, but blood pressure reduction may be less than expected with sibutramine.

**What about herbal medicines for obesity?**

**Dr. Sharma:** Currently no herbal remedies are recommended for weight loss.

**Are there more drugs in the pipeline for the treatment of obesity? In other words, is this an active area of development for the pharmaceutical companies?**

**Dr. Sharma:** Our increasing understanding of the complexity of energy regulation has recently led to a remarkable increase in the number of potential targets for antiobesity drugs. Currently, pharmaceutical companies are exploring a large number of molecular targets, which will hopefully result in the development of more effective and better tolerated medications for obesity. It will, however, probably take more than a decade before physicians can avail themselves of as wide a range of medications for the management of obesity, as are today available for the management of hypertension.

**Dr. Sharma, thank you very much for this interview.**

Dr. Sharma recently moved from Berlin, Germany, to Hamilton, Ontario, Canada. He is Chair of the Canada Research for Cardiovascular Obesity, and can be contacted at the McMaster University, Dept. of Medicine Research & Management Hamilton, ON L8L 2X2, Canada

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**Battling the Hypertension & Obesity Epidemic continued**

and siblings did not exercise regularly. Smoking among fathers, siblings and mothers was 48%, 10% and 8%, respectively. The lifestyle habits were perceived as a "family affair" starting in the early teens. Pediatricians note that preschool and elementary pupils constantly crave fast foods, guzzle soft drinks and pass leisure time watching television and playing video games. Cigarette smoking starts as early as 7 years of age in males during elementary school. Females start smoking during high school.

An ongoing study among students in an exclusive religious private elementary school located in an affluent subdivision is monitoring healthy eating habits and exercise in relation to weight and BP changes. For the next two school years a report card will track BP changes and weight gain for the underweight and weight reduction for the overweight child. A similar study will be conducted among public high school students. Hopefully, healthy lifestyle habits will modify weight and BP among different economic and educational levels. PSH, PASOO, Department of Education and Culture, Parent-Teacher Associations and Association of Public School Physicians have a common stake in these projects.

In September, "walk while you can" daily exercise activity was launched to highlight the role of exercise in weight reduction. The public was asked to reconsider patronizing "weight reduction clinics" which utilize celebrities to entice patronage despite use of unproven and nonscientific activities. Certain surgical procedures, ingestion of fiber and herbal supplements, spot reduction, acupuncture, vibrating belts, body wraps, electric muscle stimulation, and sweat suits, among other gimmicks, were exposed as unproven methods of sustaining weight reduction. Finally, educational materials will emphasize that it is hard to quit smoking, to exercise, to eat healthy foods or to reduce excess weight if other members of the family will not do the same. Lifestyle modification is a family affair.

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Calendar

13th Biennial Congress of the Southern African Hypertension Society
March 7–9, 2003
Johannesburg, South Africa
Information: SAHS,
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PO Box 122, River Club,
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Fax: (+27) 11 706 4915
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Cardiovascular Disease Prevention VI
March 12–14, 2003
London, United Kingdom
Information: Hampton Medical Conferences
127 High Street,
Teddington, Middlesex TW11 8HH, UK
Phone: (+44) 20 8977 0011
E-mail: hmc@hamptonmedical.com

Joint WHL-EHS Meeting in conjunction with the Pan Arab Hypertension Annual Scientific Meeting
April 9–11, 2003
Cairo, Egypt
Information: Dr. Adel Al-Etriby
Prof. of Cardiology, Ain Shams University
E-mail: etrebv@hotmail.com

13th Congress of the European Society of Hypertension
June 13–17, 2003
Milan, Italy
Information: Dr. Giuseppe Mancia;
University of Milano-Bicocca,
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Via Donizetti, 106
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18th Annual International Interdisciplinary Conference on Hypertension
June 22–25, 2003
Accra, Ghana
Information: ISHIB, 2045,
Manchester Street, NE,
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Impressum

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