

Euro Endocrinology 2018 : Analysis of the avrora study: reduxine met (sibutramine+metformine) safety monitoring in patients with type 2 diabetes mellitus and alimentary obesity - Tatiana Romantsova - Moscow State Medical University

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Abstract :

As in many other developed nations, the problem of obesity and diabetes is acute in Russia, where there prevalence is approximate 24.1% (28 million people) and 12% (8.5 million people) of the population respectively. In Russia, the only combination of sibutramine and metformine (Reduxin Met) is authorized to reduce weight and prevention development of type 2 diabetes mellitus or its complication. In order to implement the principles of active monitoring of the efficacy and safety of Reduxin Met in the current clinical practice and to develop a skill of reasonable prescribing the observation study "AVRORA" was conducted in 2015-2017 under the auspices of Endocrinology Research Centre and the Russian Association of Endocrinologists. "AVRORA" study was attended by 259 endocrinologists and 5.812 patients with obesity and diabetes. The Duration of Reduxine Met treatment was determined by the attending physician up to 6 months. Reduxine Met was being added to the diabetes therapy, that was chosen by More than ninetieth of patients with sort two polygenic disease have a BMI ≥ 25.0 kg/m². In 2013, the yankee Medical Association selected fat as a chronic illness, and there's growing appreciation of fat as a posh chronic condition caused by multiple factors, as well as behaviors, genetics, and therefore the atmosphere. animal tissue is associate endocrine organ, emotional and responding to hormones that contribute to metabolic illness, as well as polygenic disease. fat affects all organ systems, inflicting enhanced rates of vas and urinary organ illness, sure cancers, arthritis, and sleep disorder. Given the high prevalence of concomitant illness, most clinicians can have patients with each polygenic disease and fat. Previous studies have shown that an absence of your time and coaching limits clinicians' need to have interaction patients in weight management discussions. However, analysis shows that clinicians will with success offer activity subject matter for fat and even have necessary roles in concerning weight loss programs PRN, following au

the attending physician, prior to the patient's participation in the program. The BMI reducing dynamics during 6 months was 5.4, 2.3 kg/m². The average waist circumference reduction was 13.8, 7.4 sm. The average fasting plasma glucose and HbA1c reduction were 2, 1.6 mmol/l and 1.2, 1.1% respectively. It was shown that the weight loss during prolonged Reduxine Met therapy under the supervision of a physician was associated with decreased levels of systolic and diastolic blood pressure and had no affect on heart rate. In "AVRORA" study it was shown that addition of Reduxine Met (sibutramine+metformine) to the complex therapy of the diabetes in combination with obesity according to approved indications is safe and effective for long-term treatment in regards to weight loss, regulation of lipemic index, glucose profile and quality of life.

Introduction:

courant patients' weight loss goals, and providing in progress support and encouragement. Thus, it's necessary for clinicians to grasp fat treatment in patients with polygenic disease as a result of modest weight losses of 3-5% of initial weight improve aldohexose intolerance and A1C, slow complications of polygenic disease, scale back the necessity for glucose-lowering agents, and stop the progression of prediabetes to sort two polygenic disease. this text can summarize pointers for medical procedure treatment of fat in patients with polygenic disease. Diagnosing fat Obesity is historically diagnosed by BMI, that is associate correct approximation of adiposeness for many people. Recent pointers from the yankee Academy of Clinical Endocrinologists (AACE) and therefore the yankee Heart Association/American school of Cardiology/The fat Society (AHA/ACC/TOS) suggest that clinicians appraise metabolic health additionally to BMI. Patients ought to be screened for fat with

annual calculation of BMI when activity each height and weight. For patients with a BMI ≥ 25 kg/m² (≥ 23

kg/m² in those of Asian ethnicities), clinicians ought to assess for excess adiposeness by taking under consideration muscularity, association standing, edema, and sarcopenia. For patients with a BMI ≥ 25 kg/m² however < 35 kg/m², clinicians ought to assess waist circumference to additional stratify patients by risk. within the us, a waist circumference ≥ 88 cm (35 inches) in girls and ≥ 102 cm (40 inches) in men indicates abdominal adiposeness and enhanced risk for cardiometabolic illness. In Southeast Asian and East Asian populations, a waist circumference ≥ 80 cm (31 inches) for ladies for ladies cm (33 inches) for men indicate higher risk. Staging fat via associated comorbid conditions and weight-related health and purposeful limitations has been counseled however isn't nonetheless statute in most printed pointers. Patients UN agency square measure diagnosed with overweight or fat ought to even be screened for, at minimum, the comorbidities listed in Table one, that square measure related to enhanced adiposeness.

Approaching the load Loss Discussion Clinicians ought to be sensitive once discussing the designation of fat with patients. many studies have shown that patients with fat square measure regarded fifth reduction in all-cause mortality compared to weight-neutral patients. within the Look AHEAD (Action for Health in Diabetes) trial, adults with sort two polygenic disease associated overweight/obesity UN agency were irregular to an intensive life-style intervention for weight loss had a six.0% weight loss at nine years compared to a three.5% weight loss within the management cluster. though the intervention cluster failed to come through a major reduction in vas events compared to the management cluster, various alternative health enhancements occurred, as well as reduced sleep disorder, lower A1C, reduced would like for polygenic disease medications, improved quality and quality of life, fewer hospitalizations, and reduced health care prices. Moreover, a secondary analysis of participants UN agency lost and sustained $\geq 10\%$ of their weight, including $> 25\%$ of intervention subjects, did show vital enhancements in vas morbidity and mortality. A sustained seven-membered weight loss improves several alternative outcomes in patients with polygenic disease and overweight/obesity, as well as fitness, waist circumference, pressure, sexual functioning, and reported peripheral pathology symptoms. Clinician-

with less respect than normal-weight patients; experiencing such biased interactions has been shown

to negatively have an effect on weight-related behaviors like binge-eating, weight flight, and health outcomes. Approaching discussions regarding weight loss with the five A's model for behavior modification has been shown to extend patients' motivation to slim down and improve their success at weight loss. The 5 A's, delineate in square measure a very important framework despite whether or not clinicians can offer weight loss support in their observe or are going to be referring patients to a weight loss program.

Weight Loss Goals Weight loss of 5–10% of baseline weight is suggested as associate initial goal of treatment, and this quantity of weight loss is related to a zero.6–1.0% reduction in A1C and various alternative health enhancements. However, weight loss of as very little as 2–5% produces a clinically substantive reduction in fast glucose (20 mg/dL). The yankee polygenic disease Association (ADA) recommends that patients with prediabetes lose seven-membered of baseline weight to avoid developing polygenic disease. Managed Weight Loss Support Versus Referral to Weight Loss Program When patients square measure able to discuss weight loss ways, clinicians ought to confirm whether or not they square measure able to offer intensive subject matter and follow-up for weight loss in their clinical observe or whether or not they ought to instead refer patients to an outdoor weight loss program. The two016 enzyme pointers and therefore the 2013 AHA/ACC/TOS pointers suggest that clinicians refer patients with fat and sort 2 polygenic disease to high-intensity programs. Per these pointers, high-intensity programs involve a minimum of 14–16 visits over six months. In-person programs lead to additional weight loss than electronically delivered interventions, however each turn out additional weight loss than no program. whether or not clinicians offer intensive support for weight loss or refer patients to a high-intensity program, they ought to see patients a minimum of each three months to watch their glucose management as a result of patients could need weakened doses of glucose-lowering medications as they slim down.

Clinicians will take into account managing weight loss in their patients if they're able to offer the high

frequency of visits, furthermore because the necessary activity and nutritional support. Individual

dualised weight loss support is additionally contingent clinicians having enough time to require in-depth histories of patients' daily routines and consumption behaviors. The AACE/ACE pointers suggest that a weight loss intervention involve activity medical aid that specialize in goal-setting, education, self-monitoring, problem-solving ways, information management, activity catching, stress reduction, psychological analysis (with treatment if indicated), psychological feature restructuring, psychological feature interviewing, and mobilization of social support structures. health care covers fat screening and intensive subject matter within the medical aid setting, which can encourage clinicians to supply these services. Given the intensity of follow-up needed, several clinicians could choose to refer patients to evidence-based weight loss programs in their community. However, these clinicians ought to remember that guideline-adherent community weight loss programs is also tough to search out. well-liked industrial weight loss programs square measure on the market in several communities, associated pointers recommend that referral to an evidence-based industrial weight loss program that has documented effectuality via rigorous scientific studies is a suitable strategy. Table three summarizes outcomes with Weight Watchers, Jenny Craig, and Nutrisystem, which generally comprise the bulk market share within the industrial weight loss trade. each Weight Watchers and Jenny Craig have had irregular, controlled trials (RCTs) documenting their semipermanent weight loss effectuality, and Jenny Craig has incontestible semipermanent glycemic edges among patients with polygenic disease. Another community referral choice is that the Centers for illness management and hindrance (CDC) National polygenic disease hindrance Program (DPP), that is predicated on the polygenic disease hindrance Program RCT, during which associate intensive activity program delayed the event of sort two polygenic disease and showed a fifty eight reduced progression to polygenic disease compared to an effect cluster. Patients with prediabetes are often observed a clinical center or YMCA that contains a certified National DPP program. starting in Jan 2018, National DPP interventions are going to be lined by health

care, that may be a vital profit for health care patients with prediabetes. Behavioral parts of Weight Loss and Weight Loss Maintenance

The goal of weight-related activity changes and programs ought to be to attain a caloric deficit of 500–750 kcal/day. Dietary approaches that by selection prohibit fat or carbohydrates or by selection increase macromolecule or fiber square measure equally effective in manufacturing weight loss if they meet the targeted reduction in calories. every of those dietary approaches is taken into account safe for patients with polygenic disease, and every is effective if patients square measure able to adhere to the caloric restrictions. Patients could believe that they're going to have the next probability of success if they use a meal-replacement choice, and this feature is also significantly useful to patients UN agency have restricted time or ability to arrange food. As patients come through caloric reduction, they will ought to monitor their glucose additional usually betting on that glucose-lowering medications(s) they take. It is necessary to grasp that reducing caloric intake is more practical at achieving initial weight loss than solely increasing exercise. Patients UN agency created dietary changes alone lost seven metric weight unit additional at the 6-month follow-up than patients UN agency supplemental physical activity alone. Physical activity remains necessary for maintaining weight loss however mustn't be the first focus of activity modification for weight loss. Patients on hypoglycemic agent ought to increase aldohexose observation once beginning a brand new exercise plan to avoid hypoglycaemia throughout or when exercise. The bureau will suggest that every one adults, despite their weight or polygenic disease standing, get one hundred fifty min/week of moderate aerobic activity and perform resistance exercise doubly per week. Achieving this quantity of

physical activity, furthermore as avoiding long periods of inactivity, square measure smart initial goals for patients UN agency don't seem to be physically active. Self-monitoring is another necessary tool in weight loss and weight maintenance efforts. Daily self-weighing has been shown to boost individuals' ability to refrain from excess caloric intake and so promotes weight loss. Breaks in daily deliberation square

meas
ure related to weight regain. to boot, each the
AHA/ACC/TOS and
AACE/ACE pointers suggest observation physical

activity and food intake.
For maintaining weight loss,
the enzyme pointers suggest that patients
with polygenic disease be observed a semipermanent (at
least one year) weight maintenance program that
involves a minimum of monthly visits, a minimum
of weekly weight measurements, and a minimum
of 200–300 min/week of physical activity.

Medication Management
In addition to promoting patients' healthy life-
style changes, managing medications is a very
important role for clinicians in treating patients
with sort two polygenic disease and fat.

Clinicians ought to take into
account fixing the polygenic

disease medication plan and exploitation weight loss
medications for these patients.

First, clinicians ought to think about using the
subsequent glucose-lowering medications that square
measure weight neutral or could promote weight
loss: antidiabetic drug, pramlintide, glucagon-
like amide one (GLP-1) receptor agonists,
dipeptidyl proteinase four (DPP-4) inhibitors, and
sodium–glucose cotransporter two (SGLT2)
inhibitors. antidiabetic drug has been related to a 3-kg
weight loss. additionally to being related to a three.7-kg
weight loss, pramlintide can even lower
daily hypoglycemic agent necessities in patients
with polygenic disease on hypoglycemic agent medical
aid .GLP-1 receptor agonists are related to a five.3-kg
weight loss. DPP-4 inhibitors square
measure typically weight neutral. Finally, SGLT2
inhibitors will promote a two.4-kg weight loss and
lower hypoglycemic agent necessities. Of

note, there's typically no profit to exploitation DPP-4
inhibitors and GLP-1 receptor agonists at the same
time as a result of they work on an
equivalent pathway. additional discussion on

pharmacotherapy for fat in patients with polygenic
disease is roofed elsewhere during this issue.

In addition to avoiding polygenic disease medications
that square measure related to weight gain (e.g.,
sulfonylureas, thiazolidinediones, and insulin),
clinicians ought to conjointly assess

for alternative medications that square measure related
to weight gain. once attainable, clinicians ought
to commit to scale back or realize alternatives to
common medications which will increase craving and
promote weight gain, as well as sedating antihistamines,

ster
oids, some selective 5-
hydroxytryptamine uptake inhibitors, beta-blockers, and
most antianxiety agent agents. The
AACE/ACE tips suggest that patients with polygenic

disorder and a BMI ≥ 27 kg/m² be prescribed weight
loss medications. Treatment of fleshiness through
pharmacotherapy, in conjunction with a healthy life-
style, directly improves
glycemic management . 5 medications area

unit currently approved by the U.S. Food and Drug
Administration (FDA) for long use for weight loss.
Table five provides an summary of their weight loss
and A1C outcomes and their aspect effects. to

boot, adrenergic drug medications area unit approved
for short use (up to twelve weeks). To avoid weight
regain, the ADA recommends long use of weight loss
medication for patients WHO with success turn on the
medication. Therefore, this text can focus solely on

medications approved for long use. For patients whose
weight loss is <5% of initial weight when the initial
treatment amount on a given medication (various
medications have completely different initial treatment
periods), the medication ought to be interrupted and an
alternate medication or approach ought to be tried.

The AACE/ACE tips suggest watching patients WHO are
unit on hypoglycaemic agent or sulfonylureas
for symptom when beginning any weight loss
medication. once considering these medications,

clinicians ought to discuss typical weight loss
results, aspect effects, and medicine prices with their
patients. Obesity Treatment in kind one polygenic
disorder Obesity is more and more common in patients
with kind one diabetes; in 1988, twenty fifth of 40- to

49-year-olds with kind one polygenic disorder had
overweight or fleshiness compared to sixty eight in
2007. Patients with kind one polygenic
disorder can have to be compelled to still take

their hypoglycaemic agent and try for a caloric
reduction of 500–700 kcal/day to turn.
The ADA recommends that adults
with kind one polygenic disorder meet

the bureau recommendations for physical activity for
all adults—150 min/week of moderate aerobic activity
and 2 sessions of resistance coaching per
week. Patients with kind one polygenic
disorder beginning a replacement exercise plan or
caloric reduction can have to be compelled to monitor
closely for symptom. additionally, the load loss
medications delineated higher than also can be thought

of for patients with kind one polygenic disorder.
Pramlintide is

also thought of in patients with kind one polygenic disorder as a method of reducing their hypoglycaemic agent needs and promoting weight loss.

Conclusion

Weight loss is especially vital for people WHO have each polygenic disorder and fleshiness. due to the high prevalence of their co-occurrence, clinicians ought to bear in mind of the rules for treating fleshiness in patients with kind a pair of polygenic disorder. The ADA, AACE/ACE, and AHA/ACA/TOS tips all suggest referring patients to high-intensity weight loss programs. Caloric reduction is that the mainstay of weight loss, and increased exercise is crucial for maintaining weight loss. Medication management is additionally vital for these patients, whether or not that involves choosing polygenic disorder medications that promote weight loss or area unit weight neutral, prescribing medications approved for weight loss, or both.

Biography :

Tatiana Romantsova is a professor at department of endocrinology in Sechenov University, Moscow (2002 – present). Her previous professional experience includes research associate, Associate Professor; Moscow Medical Academy named after I.M. Sechenov. Education: Medical Institute, Vinnitsa, Ukraine, USSR (the degree of medical doctor); Postgraduate Education: Moscow Medical Academy named after I.M. Sechenov. Main scientific areas: obesity, metabolic syndrome, type 2 diabetes, neuroendocrinology. She is the author of 210 scientific articles in this field. She has membership membership in professional various organizations: Russian Association of Endocrinologists, Head of section “Metabolic syndrome. Obesity”; (Obesity and Metabolism), Quarterly Peer-Reviewed Medical Journal; - Scientific Editor.

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