



## Metabolic Syndrome in Family Practice: Case Report

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**ABSTRACT:** *Metabolic syndrome is called as the combination of various risk factors -which is believed to share common etiopathogenesis involved in the development of cardiovascular diseases. Basic components are abdominal obesity, insulin resistance, impaired glucose metabolism, hypertension, dyslipidemia, inflammation, hypercoagulopathy and microalbuminuria. Each of these components is a factor that can be remedied by the individual and Holistic Family Medicine approach. In this case report, the approach of Family Medicine in a patient with metabolic syndrome has been tried.*

**Keywords:** *Approach, family physician, metabolic syndrome.*

### I.INTRODUCTION

Metabolic Syndrome is a common and increasingly prevalent disease. The disease has different names (Insulin resistance syndrome, syndrome x, polymetabolic syndrome, fatal syndrome, civilization syndrome) and various definitions. However it is a fatal endocrinopathy basically starting with insulin resistance in which systemic disorders are added to each other (1). In 1998, The World Health Organization (WHO) defined the metabolic syndrome as diabetes, impaired fasting glucose, impaired glucose tolerance or presence of at least two of following findings; along with insulin resistance hypertension (> 160/90 mmHg), hyperlipidemia, central obesity (2). In the pathogenesis of metabolic syndrome, it is discussed that the whole clinic develops on the ground of insulin resistance (1).

The prevalence of the metabolic syndrome is on a critical level in the world. In the United States (USA), the average prevalence in the general population is found as 23.7% in the age group of 20-29 and 6.7% in the age group of 60-69 (3). It is found among the women and men in the age group of 20-29 as 7% in France, 8% in India, 26.7% in Korea and less than %10 in Iran (2). It is found as %27 among the men age of 30 and over ; %38,6 among the women in Turkey heart disease and risk factors prevalence study in adults (TEKHARF) (4). In the Turkish Metabolic Syndrome Survey (METSAR), the overall prevalence is 28% in men and 39.6% in women (5). When its prevalence is considered, this syndrome -as an important public health problem- is crucially important in family medicine practice (6).

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This study aimed to draw attention to the importance of patient follow-up in the treatment of metabolic syndrome in family medicine practice. A follow-up of the metabolic syndrome, a public health problem, has been discussed over a case in this study.

## II.CASE

A 17-year-old girl applied to the family medicine unit with the weight gain complaint occurred 5 years ago and has been increasing over the last one year. The patient had no any other complaints; however type 2 diabetes mellitus was present in the patient's grandmother, and type 2 diabetes mellitus and anamnesis of hypertension were present in the patient's grandfather.

The anthropometric measurements of the case: the length was measured as 176 cm (> 97p), weight 108 kg (> 97p), body mass index (BMI) 34.9 (obesity at 1 st degree), waist circumference 100 cm and hip circumference 120 cm. On physical examination the oropharynx was normal. Heart sounds were normal, there was no additional sound and no murmur. Respiratory sounds were normal, peripheral pulses were palpable, electrocardiography was normal. Heart rate was 84 beats / min, arterial blood pressure was measured as 120/80 mmHg in the right arm and 125/80 mmHg in the left arm and evaluated as normal according to the percentile values. Acanthosis nigricans was observed around the belly. Laboratory tests revealed no abnormality other than high insulin levels (47.9 IU / ml) and low HDL.

The Oral Glucose Tolerance Test (75 grams) resulted in a blood glucose level of 112 mg / dl at second hour.

Because the patient had abdominal obesity and dyslipidemia in addition to insulin resistance, the patient was diagnosed as metabolic syndrome (7). Having a sedanter lifestyle and high calorie eating habits, the patient was educated about family-related lifestyle changes (8). Salt-free diet, nutritional changes and sports were suggested. After the patient was advised to apply to family medicine unit once a month, she was started to be followed up. The follow-up of the case is ongoing. The follow-up data of the case are given in the table below.

**Table 1.** Follow-up chart

	Length	weight	body mass index	Insulin	fasting blood glucose	HOMA	Diet	Sports
First examination	176	108	34.9	47.9	93	10.9	+	+
Follow-up 1		101.7	32.9		90		+	+
Follow-up 2		97.7	31.6		80		+	+
Follow-up 3		92	29.7	17.6	72	3.12	+	+

## III.DISCUSSION

It is currently being discussed that if early and aggressive treatment of the metabolic syndrome is successful, the risk of developing type 2 diabetes mellitus and coronary artery disease may be reduced (7).

It is certain that the metabolic syndrome is a collection of the risks that arise on the ground of genetic predispositions, sedentary lifestyles and the insufficient nutrition. The characteristic of family medicine practice is close follow-up of patients and chronic disease. With the family medicine's protective approach based on risk factors and individual characteristics, the possibility of occurring coronary heart disease and diabetes mellitus can be significantly reduced. Fighting with one of these factors also allows the other factors to be removed or reduced.

It is thought that by evaluating these principles, the patient's metabolic syndrome can be controlled with a strict follow-up of the patient by family medicine practice.

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