

THE ROLE OF TAILORED TREATMENT ON CONCEPTION AND PREGNANCY AT PATIENTS WITH INSULIN RESISTANCE

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OBJECTIVES

Insulin resistance (IR) is a multi-faceted¹, and sometimes with difficulty revealed² metabolic abnormality, precursor of diabetes mellitus, possibly responsible for obesity, polycystic ovary syndrome (PCOS), hypertension, dyslipidemia and atherosclerotic cardiovascular disease.^{3,4} Patients of reproductive age with insulin resistance are often confronted with conception difficulties, out of the listed only PCOS has an estimated prevalence of 5-10%⁵ among them. Our aim was to provide a complex and tailored treatment to women suffering from insulin mediated metabolic disorder with or without PCOS, to collect qualitative data on their case history, focusing on a subgroup of patients who desired pregnancy.

METHODS

Our database containing over 10.000 female patients with metabolic disorder was randomised using the records between 2007 and 2012. Out of 1500 patients 1178 fitted the inclusion criteria for the retrospective data analysis:

- diagnosed with IR or IR and PCOS
- between ages of 18-45 years
- regular check-ups with time intervals not longer than 6 months
- at least 3 visits available.

Their tailored treatment consisted of diet, physical exercises based on BMI and body constitution (evaluated with InBody R20), medical treatment (if needed) and coaching.

RESULTS

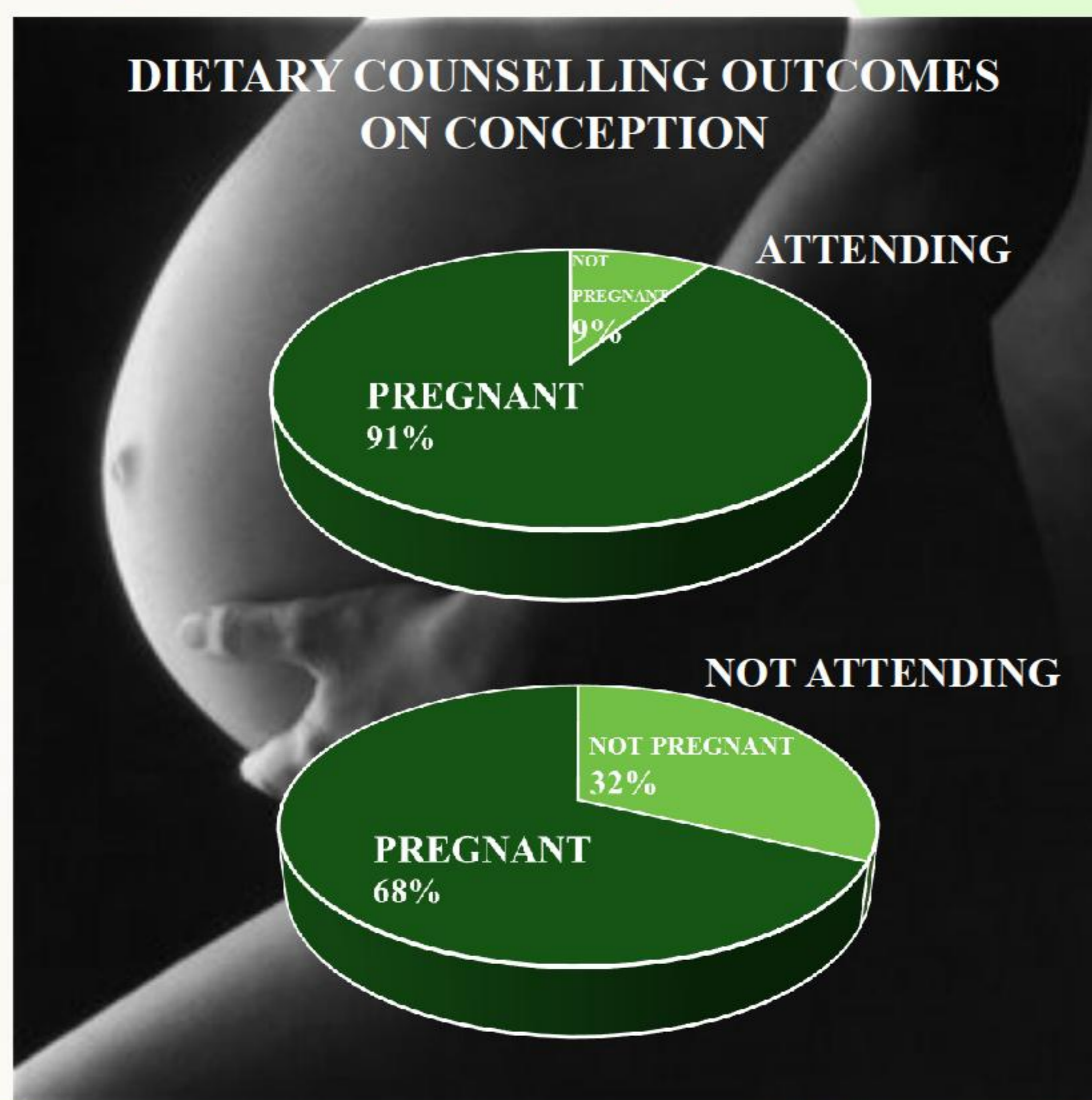
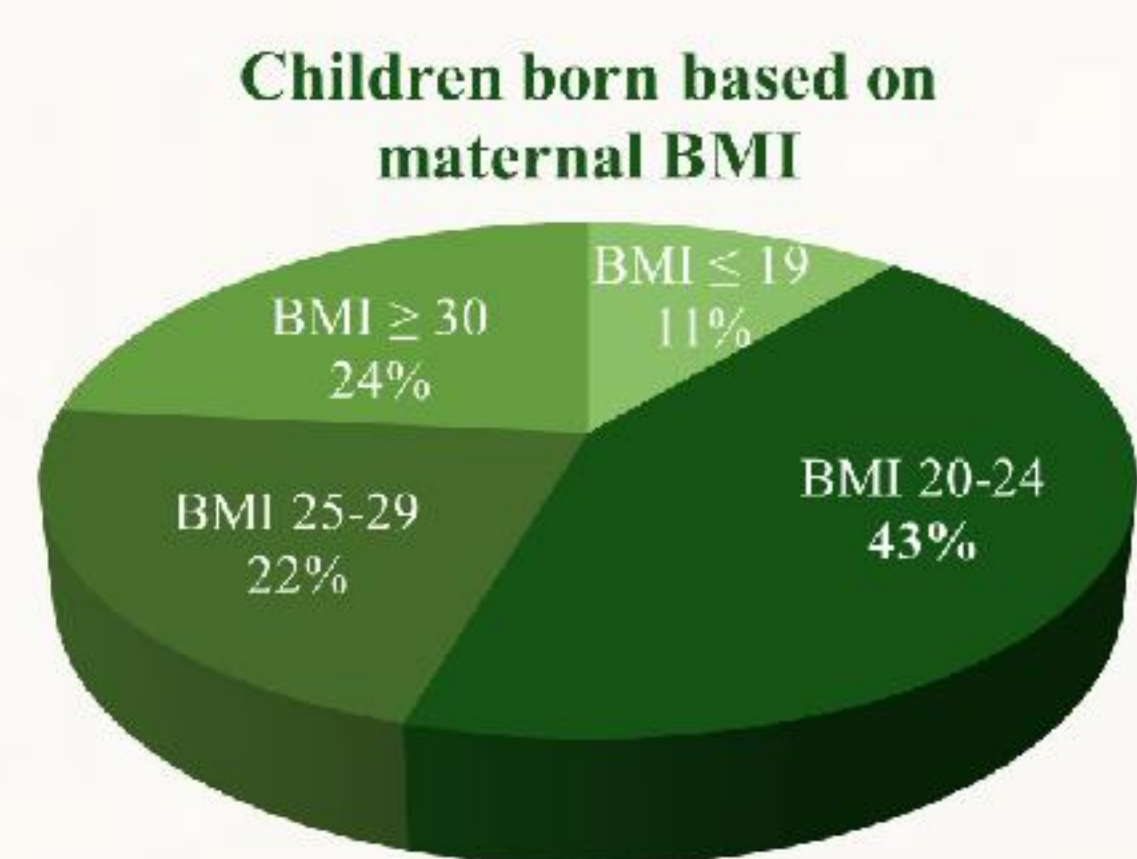
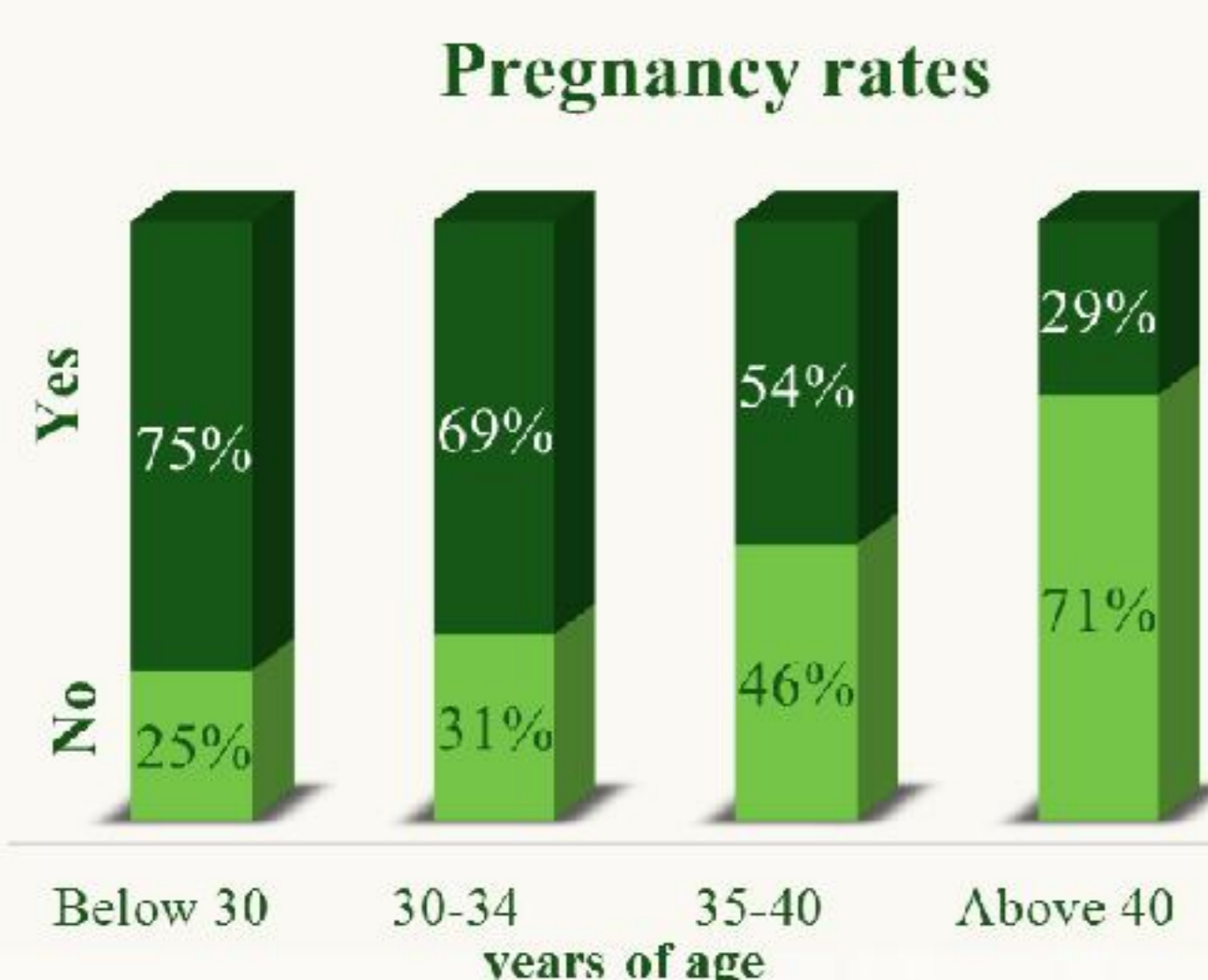
Women of reproductive age diagnosed with insulin mediated metabolic disorder suffer from menstrual cycle disorders to an extent of 40%. By 3 years of ongoing treatment menstrual cycle disorders could be decreased to 19%.

More than 25% out of 480 pregnant women with hyperinsulinemia had at least one assisted reproduction procedure in their lives. 42% of patients with insulin resistance experienced missed abortion, out of them 26% one time, 12% two times.

Focusing on a smaller group of 224 patients more than 71% became pregnant due to this complex and tailored method. Pregnancy rates were different according to ages: 75% up to 35 years of age, getting less to 43% above 40 years of age.

The outstanding role of dietary treatment is remarkable: patients attending (not necessarily following!) dietary counselling became pregnant up to 90%, while patients not joining these consultations were successful up to 68%.

During pregnancy the complex tailored treatment continued. Gestational diabetes mellitus (GDM) occurred in 39% of the cases. Mothers with former PCOS developed GDM up to 36%. The average birth weight of the babies was 3321g.



Distribution of birth weight



CONCLUSIONS

Complex tailored treatment helps women of reproductive age to improve their quality of life by reducing their menstrual cycle disorders, raising the number of desired pregnancies and positively affecting the health of newborn babies despite the higher risk of GDM. We would like to point out that insulin mediated metabolic disorder being a heterogeneous and not always easily evaluated disease needs a complex and tailored treatment, focusing not only on the most adequate medication, but also on the crucial lifestyle changes, such as appropriate diet and physical exercises that can have a profound impact on successful treatment.

Complex tailored treatment can only reach the goals set with a close follow-up on the patients' status, constantly adjusting to individual physical changes and applying interactive cooperation between patient and medical staff.

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