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Abstract Topic:- Complex traits and polygenic disorders

Abstract Title:- Assessment of Intermittent fasting as an effective strategy for management of overweight and obesity conditions.

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Aims:-Overweight and obesity are epidemic conditions and its metabolic consequences are a major public health problem worldwide. According to the World Health Organization (WHO) about 13% of the world's adult population (11% of men and 15% of women) were obese in 2016. Prevalence of obesity nearly tripled between 1975 and 2016. Moreover, the metabolic diseases have been linked to obesity as a contributing factor. While the underlying causes are multifactorial, lifestyle therapy is widely accepted as the first-line of treatment for management of metabolic diseases, but there is no agreement on an optimal regimen. The objective of this study was to explore the feasibility of intermittent fasting as a management strategy for overweight and obesity condition.

Methods:- This study has been approved by the Institutional Human Ethical Committee of Gujarat University (REF: GU-IEC(Niv)/02/PhD/033). Obesity was evaluated using the BMI and all Anthropometric parameters quantified using the bioelectrical impedance method. In this study, 490 participants were recruited from the Intermittent Fasting Research Foundation (IFRF) Ahmedabad, over a period of 6-months. All participants followed the same scheduled 16 -hour fasting and 8- hour feeding window and similar dietary routine daily, over the entire period of study.

Results:- The results showed the metabolic reprogramming and significant improvement of metabolic risk factors, body composition, and fat loss in obese individuals at the end. We observed an overall decrease in the body weight, BMI, visceral fat, subcutaneous fat, waist circumference during 1 to 6 months interval, which was statistically significant. Moreover, loss of skeletal muscle mass was not observed signifying that decrease in BMI was due to fat loss. Additionally, the participants demonstrated a stable resting metabolic rate throughout the study period.

Conclusions:- These observations suggest that intermittent fasting may be a safe and feasible intervention for overweight and obesity management.

Keywords:- Obesity, Overweight, Intermittent Fasting, BMI, Resting Metabolic Rate