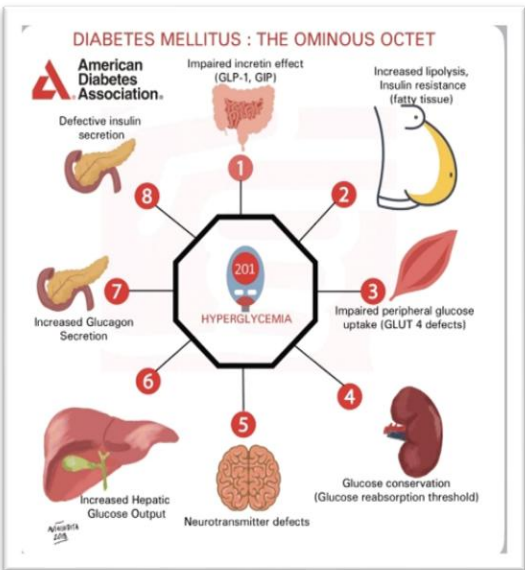


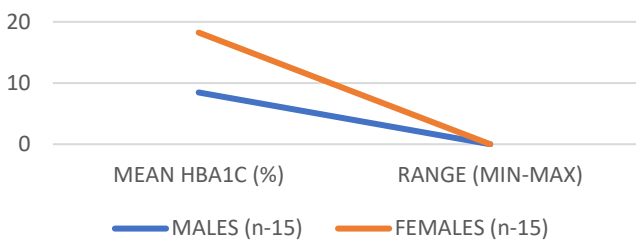
Study Title: Gender-Based Organ Susceptibility in Diabetes Mellitus Using Ralph A. DeFronzo's Ominous Octet Model



AUTHOR:- DR ZOHRA F. KHAN PG STUDENT (GURU MISHRI HOMEOPATHIC MEDICAL COLLEGE)

CO-AUTHOR:- DR ALI-SHAH N.F. MD.(HOM) RSSDI MEMBER (11649)

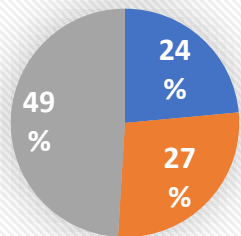
Mean HbA1c (%) Distribution Among Male and Female Diabetic Participants:



Mean HbA1c levels were higher in females (9.79%) than males (8.46%). Overall, 70% of participants (21/30) had HbA1c values above 8%, indicating poor glycemic control.

Mean HbA1c was significantly higher in females than males (unpaired t-test, $p < 0.001$)

Distribution of FIB-4 Categories Among Diabetic Participants:



■ Male ■ Female ■ Total

- FIB-4 Score: Most participants had low fibrosis risk (25/30), with a few showing moderate risk (5/30). No participant had high fibrosis risk. Females had slightly higher low-risk prevalence (14/15) compared to males (12/15).
- FIB-4 category distribution did not differ significantly between genders (Fisher's exact test, $p = 1.00$)

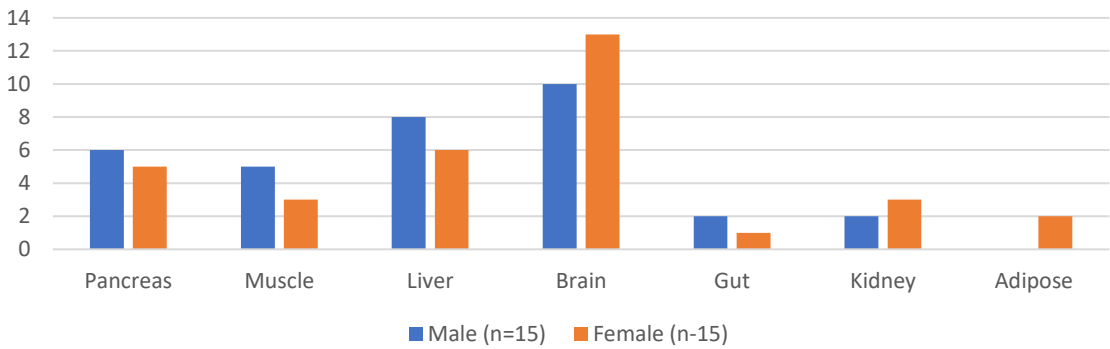
OBJECTIVES/AIMS

- To analyse gender-based differences in organ susceptibility among patients with Diabetes Mellitus.
- To identify which organs are more affected in males and which in females in Diabetes mellitus.

METHODOLOGY

An observational, comparative study was conducted over 6 months at Alis Plus Health, Mumbai and Pune. A total of 30 participants (15 males and 15 females) was assessed using a structured questionnaire.

Results



Overall organ-distribution differences between males and females were not statistically significant (Chi-square test, $p = 0.704$).

CONCLUSION

- Brain and liver were the most affected organs in both genders. Females showed higher neurological involvement (13/15) and mean HbA1c (9.79%), indicating poor glycemic control and neuroendocrine vulnerability. Males had more pancreatic (6/15) and muscular (5/15) involvement, reflecting metabolic strain.
- Most participants (25/30) had low FIB-4 scores (<1.3), indicating early or controlled liver involvement; none had high fibrosis risk.
- Statistical analysis performed using unpaired t-test for continuous data (HbA1c), Fisher's exact test for categorical data (FIB-4), and Chi-square test for organ involvement; significance set at $p < 0.05$.
- In summary, females had greater neuro-hepatic susceptibility, while males showed more metabolic organ involvement. Elevated HbA1c in both groups highlights the need for gender specific diabetes management.