Background T2DM is a progressive disease with which can affect multiple body systems. And has a rapidly increasing prevalence.

Visfatin is one of the adipokines which might play a role in the pathogenesis of T2DM, insulin resistance and all parameters of metabolic syndrome.

Also Fetuin-A is a protein synthesized by the liver and released in the circulation. It resembles serum albumin but is more abundant during fetal life. It is involved in several functions such as endocytosis, brain development and the formation of bone tissue, however its exact significance is still obscure, its importance in T2DM, Insulin resistance is still debatable.

The aim of this study is to assess the level of fetuin-A and visfatin in patients with T2DM and to correlate their levels with clinical and other biochemical variables in patients

Objectives Assessment of the level of novel markers fetuin-A and visfatin in patients with type 2 diabetes mellitus and to correlate their levels with clinical and other biochemical variables in such patient

Methods This case control study was conducted on 88 participants divided into two groups.

First group included 44 already diagnosed type 2 diabetes (cases), 19 males and 25 females, their age ranged between 10 and 16 years. They were selected by stratified random method from outpatient clinics and inpatients of Mansoura children hospital.

Second group included 44 apparently healthy non diabetic individuals of matched age and sex (control group). Their non-diabetic state was confirmed by oral glucose tolerance test. A written consent was obtained from all participants.

Both groups were subdivided into 2 subgroups, obese group ($\text{BMI} \geq 30 \text{ kg/m}^2$), non-obese group ($\text{BMI} < 30 \text{ kg/m}^2$)

Results There was no significant difference between all study groups as regard age, gender, smoking, systolic, diastolic, mean blood pressure, LDL-C and total cholesterol (all p -value > 0.05).

There was a significant difference between all study groups as regard body mass index, HDL-C, TG, fasting blood glucose, 2 hour post-prandial blood glucose, fasting insulin, HOMA-IR, HbA1c, visfatin and fetuin-A (all p value < 0.05)

Conclusions Our study concluded that serum visfatin levels were higher in patients with T2DM versus control subjects also serum visfatin was high in obese subjects versus non obese whether diabetic or non-diabetic and there was positive correlation between visfatin level and HOMA-IR, FPG and BMI.

The increased level of serum visfatin in T2DM may be related to obesity, hyperglycemia which could induce visfatin release or it is a compensatory mechanism to ameliorate insulin deficiency with progressive B cell dysfunction in insulin resistant patient, or finally due to adipose tissue inflammation in insulin resistant subjects.

As regard Fetuin-A we showed that its level is deficient in T2DM and also decreased levels had been decreased in obese versus non obese subjects with negative correlation with HOMA-IR, BMI and FPG which may be due to some medications used like metformin and pioglitazone which were established to reduce the level of fetuin-A or due to non-enzymatic glycation which mask the effect of fetuin-A on insulin resistance due to glucose toxicity.

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TO BLEEP OR NOT TO BLEEP? IMPROVING NIGHTSHIFT WORKING FOR PAEDIATRIC JUNIOR DOCTORS

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Background Healthy nightshift working for doctors' wellbeing and patient safety is well documented. However anecdotally many tier-1 trainees (junior residents) struggle to take natural breaks due to non-urgent tasks communicated via the 'bleep' system.

Objectives Our aim was to record bleeps made to the tier-1 trainee over 7 nights to investigate whether there were opportunities to improve nightshift working.

Methods The study ran over 7 consecutive nightshifts (20:30–08:30) in November 2019 at a large tertiary children's department. One tier-1 trainee is supported by one tier-2 trainee (senior resident) overnight. All bleeps were logged over the period described. We analysed the bleep frequency, reason and timing.

Results 173 bleeps were received over 7 nightshifts with a mean (SD) of 24.7 (7.1) bleeps/night and 2.1 (1.6) bleeps/hour. 33 bleeps (19.1%) were for urgent patient reviews. 40 (23.1%) were prescription queries. 11 (6.4%) to re-site cannulas. 18 (10.4%) were laboratory result reviews. 19 (11%) were made in error. Only 5 bleeps (2.9%) were for multiple queries. Between 2:30am–5:30am, the natural circadian nadir, there were 6.6 bleeps (SD 1.4); 64% were scored as non-clinically urgent.

Conclusions

- We found trainees are bleeped approximately once every 30 minutes between 2:30am–5:30am, nearly two-thirds of which could have waited.
- Non-urgent tasks should be limited out-of-hours and trainees encouraged to take natural breaks.
- This could be facilitated by bleeps between 2:30am–5:30am being escalated via the ward nurse-in-charge.
- Bleep frequency tended to peak after the nursing handovers, often coinciding with doctors' handovers. Distraction during this period may lead to doctors missing important clinical information.
- Altering daytime prescribing practise to cover for the night time could reduce the prescribing pressure for a doctor over night.
- We advise offering guidance to nursing teams to cohort communication of non-urgent tasks; minimising incorrectly directed bleeps and interruptions to clinical reviews.

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MANAGEMENT OF CROUP: A QUALITY IMPROVEMENT PROJECT

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