

inpatient wards at Ain Shams University Hospitals from (Jun/2017 to Jul 9/2018) and 20 healthy subjects as control group.

**Results:** NASH patients had more obesity (BMI 30) (83.3%) than both simple steatosis patients (57.5%) and control (55.0%). NASH patients had higher BMI as compared to simple steatosis patients and control ( $p$  value = 0.01). The present study revealed that there is a statistically significant difference between groups according to IL6 ( $P > 0.001$ ) as IL6 was positive in 70% of patients with NASH while in patients with simple steatosis and control was positive in 25%, 20% respectively.

**Conclusion:** NAFLD is a highly prevalent condition, shares many features of the metabolic syndrome (MetS), a highly atherogenic condition.

**Recommendations:** Large scale multi-centre studies are recommended to study the prevalence of NAFLD in Egypt. Further studies on the effect of presence of steatosis and increased risk of hepatocellular carcinoma.

**Key words:** Interleukin 6, biomarker, nonalcoholic steatohepatitis, NAFLD

### Study of Vitamin D Deficiency in Adolescent Females (10-18 years old) In Cairo

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**Background:** Vitamin D deficiency is a common problem among Egyptian females across all age groups, for whom contributing factors include inadequate sun exposure possibly related to cultural/social factors, and insufficient dietary calcium, wearing a sunscreen reduces vitamin D synthesis in the skin by more than 95%. Not only environmental factors, such as sun exposure and nutrition, but also genetic and possibly also epigenetic factors are determinants of serum 25(OH) D.

**Aim:** We sought to determine the frequency of occurrence of vitamin D deficiency in Egyptian adolescent females aged 10-18 years in Cairo.

**Methods:** Study was conducted on 90 healthy adult females aged (10-18) years and classified them into: Sufficient group: with vitamin D level  $>30$ ng/ml, (40%) of participants. Mild deficient group: with vitamin D level between 21-29ng/ml (14.44%) of participants. Moderate deficient group: with vitamin D level between 10-20ng/ml (11.11%) of participants. Severe deficient group: with vitamin D level  $<10$ ng/ml (34.44%) of participants.

**Results:** Our study showed a high prevalence of low vitamin D level among healthy adolescent females aged (10-18) years old. There were a significant difference On comparing vitamin D status groups as regard vitamin D rich food intake, duration of sun exposure and height for age ( $p < 0.001$ ), ( $p < 0.001$ ) and ( $p = 0.012$ ) respectively. There were significant difference on comparing vitamin D status groups with s.Ca, PTH and Alk.Ph ( $p < 0.001$ ).

**Conclusion:** Vitamin D deficiency became endemic in Egypt. Large-scale studies are needed to properly evaluate the size of the problem.

### Cryoablation of goiter irrespective of thyroid profile

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**Background:** Thyroid nodules are extremely common. By age 60, about one-half of all people have a thyroid nodule. Cryoablation is used in a variety of clinical applications, using hollow needles (cryoprobes). Cryoprobes are inserted into or placed adjacent to diseased tissue which is desired to be ablated.

**Aim of work:** To evaluate the effect of Cryoablation on the size & function of thyroid nodule which may replace the need for surgery or radiotherapy.

**Patients & methods:** This is an interventional therapeutic study, conducted in Ain-Shams University hospitals; endocrinology clinic. Our study sample included 80 subjects, age between 20 & 60, having thyroid nodule diagnosed by ultrasound. Subjects were divided into 2 groups: Group 1 included 40 subjects "control group" who were not subjected to cryoablation. Group 2 included 40 subjects "cases" upon which cryoablation was done. Neck ultrasound was done for subjects & they were sampled for their TSH, free T4 & free T3 levels at start and after 3 & 6 months.

**Results:** There was high statistical significant difference between group 1 & group 2 regarding nodule size after 6 months. Group 1 showed mean nodule size ( $0.89$  cm  $\pm$   $0.25$  SD) while group 2 showed ( $0.62$  cm  $\pm$   $0.35$  SD), ( $p$ -value  $< 0.001$ ). Non-thyrotoxic cases were 6 times more liable to show nodule size reduction, from 0-6 months, more than thyrotoxic cases, which shows thyrotoxicosis as a factor against nodule size reduction in significant statistical relation. Females were more liable than males, to show nodule size reduction. There was no statistical significant difference between cases & controls regarding TSH, free T4 nor free T3 values, before study, at 3 months nor after 6 months.

**Conclusions:** Cryoablation causes nodule size reduction, especially after 2<sup>nd</sup> session. Cryoablation doesn't affect thyroid function tests, all through our study.

**Key words:** Cryotherapy, thyroid nodule, size reduction, TSH variation

### Effect of ramadan fasting on microvascular complications in type1 diabetic patients

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**Background:** Diabetes is a complex, chronic illness requiring continuous medical care with multifactorial risk-reduction strategies beyond glycemic control. Ongoing patient self-management education and support are critical to preventing acute

complications and reducing the risk of long-term complications. Significant evidence exists that supports a range of interventions to improve diabetes outcomes.

**Objective:** This study aimed to demonstrate the impact of fasting on primarily on eGFR & microalbuminuria in people with type 1 diabetes and secondarily on neuropathy & retinopathy. It was conducted on 60 patients with T1DM. All patients underwent full history taking, full clinical examination and biochemical tests including FBG, 2h PPBG, HbA1c, fructosamine, s.creatinine, BUN, uACR, eGFR, fundus examination and DN4 Q.

**Methods:** This study was conducted on 60 type 1 diabetic patients with microalbuminuria intending to fast Ramadan. Patients were recruited from internal medicine and diabetes clinics of Ain Shams University. The study performed health education 2 months prior to Ramadan 1438 (2017) with follow up throughout the month and after Ramadan. The patients were on basal-bolus regimen, 36 were on lantus, 17 were on NPH and the remaining 7 patients did not complete the follow up after Ramadan for family reasons.

**Results:** There had been significant difference between pre and post-fasting as regards weight and BMI, and non significant difference regards waist circumference. Also highly significant difference between basal and bolus doses before and during Ramadan. There had been no significant difference between pre and post Ramadan regarding fundus examination, systolic and diastolic blood pressure and a significant difference regarding DN4 Q. Regarding no. of successful fasting days and attacks of hypoglycemia, a significant difference was found. Significant difference in FBS, 2hr PPBG, BUN, s.creatinine, uACR and eGFR, and fructosamine. There was a significant positive correlation between eGFR and height, weight before Ramadan and between eGFR and height, weight after Ramadan, no. of successful fasting days Ramadan 2017. Also a significant negative correlation was shown between eGFR and A / C ratio, Cr, BUN before Ramadan and between eGFR and Cr, BUN after Ramadan. Height, BUN before and after Ramadan and A / C ratio before Ramadan were found to be independent predictors of eGFR.

**Conclusion:** Ramadan fasting appears to have significant impact on microvascular complications of type 1 DM patients. These impacts can be attributed to many factors as physical sloth, change of time and pattern of feeding, climate conditions at time of fasting especially hot humid weather predisposing to more frequent dehydration with its sequelae as well as non-compliance of some patients to the proper lifestyle, diet and medications.

### Changes of MicroRNA-377 in Diabetic Nephropathy

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**Background:** as one of the most important long term complications of diabetes, Diabetic nephropathy is the major cause of end stage renal disease and high mortality.

**Purpose:** to identify the pattern of microRNA-377 changes specific for diabetic nephropathy in diabetic patients and in patients with chronic kidney disease of different etiology.

**Patients and Methods:** the study was conducted from 2016 to 2018, included 50 patients for analysis of MicroRNA-377 and its control gene U18 at El Demrdash Hospital Ain Shams university and Quessena Hospital El Monfia. The miRNA-U18 was analyzed for normalization of correction ratio.

**Results:** the results of our research found that the highest median IQR of miR-377 was significantly present in DN stage 1&2 and the lowest median IQR was significantly present in CKD stage 1&2, and there was significant difference between group 1 (DN stage 1&2) versus group 2 (DN stage 3&4), group 3 (Diabetics without nephropathy) and all stages of CKD.

**Conclusion:** in diabetic nephropathy stage 1&2, serum miR-377 was highly significant increased more than diabetics without nephropathy, diabetic nephropathy stage 3&4 and all stages of CKD.

**Key words:** MicroRNA, diabetic nephropathy, chronic kidney disease

### Effects of Ginger Powder Supplementation on Glycemic Status and Lipid Profile in Patients with Type 2 Diabetes Mellitus

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**Background:** Diabetes is a huge problem affecting 387 million adults by a global prevalence of (8.3%) which is expected to rise to (10.1%) affecting 592 million adults by 2035. Type 2 diabetes, a growing public health problem, is associated with increased morbidity and mortality.

**Purpose:** To evaluate the effects of ginger powder supplementation on glycemic status, lipid profile, insulin resistance, insulin sensitivity, and beta-cell function in obese Egyptian patients with new-onset type 2 Diabetes Mellitus.

**Patients and Methods:** This study was conducted at the Diabetes outpatient clinic of the National Institute of Diabetes and Endocrinology (NIDE) during the period from January 2016 to January 2017.

**Study Design:** A randomized, single blind, placebo-controlled clinical trial, was performed on 80 subjects newly diagnosed with T2DM. Subjects were randomly & equally subdivided into two groups:

- **Group 1:** Ginger Group (GG), which consumed three capsules daily, each capsule containing: 600-mg of ginger powder (total daily dose was 1.8 g), they also underwent certain diet and physical activity changes, and also received metformin as one 850-mg tablet twice a day with meals for a duration of 8 weeks.
- **Group 2:** Placebo Group (PG), which received capsules of the same color, size, and number as (Group 1) but containing wheat flour, they also underwent the same diet, physical activity, and metformin dosage as (Group 1) during the 8 weeks of the study.

**Results:** Ginger powder supplementation significantly reduced body mass index, fasting blood glucose, 2-hour postprandial blood glucose, glycated hemoglobin, total cholesterol, low density lipoprotein cholesterol, triglycerides, fasting insulin levels, and homeostasis model assessment-insulin resistance index (HOMA2-IR). Ginger also significantly increased high density lipoprotein cholesterol levels, beta cell function index (HOMA2-%β), and insulin sensitivity index (HOMA2-%S).