Table 1 Makrokalsifik nodüllerin Sitolojik Bulgularının Karşılaştırmalı Sonuçları
Tablo-2: Nodül Cidar makrokalsifikasyonu saptanan ve makrokalsifikasyonu olmayan grup karşılaştırılması

Measurement of Epicardial Adipose Tissue (EAT) Thickness in Subclinical Hypothyroid (SH) Patients and To Determine The Relationship Between EAT and Abdominal /Visceral Fat Mass.

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Background

Subclinical hypothyroidism (SH) is defined as high thyroid stimulating hormone (TSH) accompanied with normal free thyroxine (FT4). SH has found to be associated with cardiovascular disease (CVD) and increased mortality. EAT is now considered to be a new noninvasive measurement method used for the early detection of CVD susceptibility. EAT has vasocrine and paracrine actions which lead to CVD. We aimed to evaluate measurement of EAT and to detect relationship between EAT and abdominal/visceral fat mass in patients with SH..

Materials/Methods

This study included 41 patients with SH and 35 healthy controls (matched in age and gender). Demographic data (age, gender, body mass index (BMI), fat mass (FM), abdominal FM, visceral FM, waist circumstance (WC), hip circumstances (HC), systolic and diastolic blood pressure) and laboratory results [fasting plasma glucose (FPG), low density cholesterol (LDL-c); high-density cholesterol (HDL-C); triglycerides (TGS); FT4, TSH and anti-TPO] were recorded. EAT was measured with transthoracic echocardiography.

Results

Fat mass, BMI, WC and WC/HC ratio, visceral and abdominal fat mass were higher in the study group than the control group ($P<0.05$). While there were no differences in terms of FPG ($p= 0.780$), there were significant differences regarding LDL-C and TGs between the two groups ($p=0.002$ and $p=0.026$, respectively). Serum TSH and anti-TPO levels were found higher and FT4 level was lower in the study group than the control group ($p<0.05$). Although there were significant differences in terms of BMI, FM, abdominal and visceral FM, WC, HC, WC/HC ratio, LDL-C and TG, there were no differences in EAT between the two groups (Table 1). Mean EAT was 4.61±0.06 mm in the study group and 4.51±0.07 mm in the control group ($p=0.532$). While positive correlation was found between EAT and demographic parameters and serum TG levels($p<0.05$), no correlation was found between EAT and TSH, FT4, LDL-C and anti-TPO level($p>0.05$) (Table 2).

Table 1: Comparison of demographic and laboratory data between the two groups

Feature	Case (n=41)	Control (n=35)	P value
Age (year)	34.07±6.70	31.82±5.57	0.121
Gender(F/M)	39/2	35/0	0.998
BMI(kg/m^2)	27.84±5.26	23.72±3.01	0.000
Fat mass (%)	31.74±7.58	26.80±6.42	0.004
Fat mass (kg)	23.09±9.89	16.85±5.99	0.002
Waist Circumstances (WC-cm)	93.68±12.09	87.94±8.38	0.038
Hip circumstances (HC-cm)	103.86±10.37	100.71±6.73	0.152
WC/HC	0.95±0.07	0.90±0.005	0.007
Visceral fat mass	9.53±4.03	7.10±2.40	0.005
Abdominal fat mass	40.24±6.57	35.33±6.32	0.004
Systolic BP(mmHg)	120.10±7.24	118.97±7.36	0.471
Diastolic BP(mmHg)	62.23±5.80	60.70±3.89	0.065
FBG(mg/dl)	90.68±6.30	89.12±7.68	0.780
TSH (µIU/mL)	14.55±6.50	1.54±0.82	0.000
FT4 (pmol/L)	11.60±2.68	14.15±1.70	0.000
Anti-TPO (IU/mL)	313.65 ± 358.69	2.42 ± 1.16	0.000
LDL (mg/dl)	125.85±31.73	104.39±25.50	0.002
TG(mg/dl)	105.90±50.08	83.75±27.17	0.026
HDL (mg/dl)	55.21±15.40	57.32±11.79	0.495
EAT(mm)	4.61±0.06	4.51±0.07	0.532

	Total (n=76)	
	r value	P value
BMI(kg/m^2)	0.402	0.000
Fat Mass (kg)	0.408	0.000
WC(cm)	0.400	0.000
HC(cm)	0.340	0.001
Visseral Fat Mass (kg)	0.321	0.002
Abdominal Fat Mass(Kg)	0.345	0.001
TSH (µIU/mL)	-0.094	0.328
FT4(pmol/L)	0.025	0.794
Anti-TPO(IU/mL)	0.202	0.088
LDL-C(mg/dl)	0.028	0.779
TGs(mg/dl)	0.270	0.006

Conclusion

Despite EAT has been playing an important role in predicting subclinical atherosclerosis in SH, this study could not support this. In our opinion, more studies with more number of patients are needed to claim that.

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