P-0305- Metabolic alterations in obese adults with obstructive sleep apnea

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Introduction:

Obstructive sleep apnea (OSA), a disorder of breathing during sleep, is very frequently associated with obesity. the OSA has also been implicated in many inflammatory and hormonal disturbances involving the mechanism of leptin and adiponectin. This work proposes to compare the anthropometric parameters, metabolic, inflammatory and hormonal in an obese group divided into two groups apneic and non apneic according to results of a ventilatory polygraphy.

Methods:

Our population consists of 105 obese who looked between October 2012 and January 2013. 45 of them have been identified at risk for OSA by Berlin questionnaire and underwent a polygraph ventilator. Patients underwent anthropometric measurements and laboratory tests including dosage of adiponectin, leptin and crp hs.

Results:

Fig 1: age of the patients

Fig 2: SAS in the population

Fig 2: Severity of SAS in the population

Tabl 1: anhrpometric differences between the two groups

	Non-apneic (n=67)	Apneic (n=38)	P value
Age (years)	42±12	48.5± 9	NS
BMI (Kg/m²)	38.4±5.7	43.8±7.5	0.001
Neck circumference (cm)	37±2.4	40.3±3	0.001
Waist circumference (cm)	113.6±16.2	125.5±15.3	0.002

Conclusions:

- The prevalence of OSA in our obese studied population was 36,2%.The prevalence of OSA in our obese studied population was 36,2%. Many studies have shown an increase of 10% of body weight or 6 kg / m² in BMI multiply by six the risk of the following four years with moderate to severe OSA [1].
- OSA severity was associated with blood glucose levels, CRP hs and adiponectin.
- Studies on the relationship between OSA and CRP have yielded conflicting results due to the confounding effects of obesity. Some investigations have found an independent correlation of OSA and CRP levels [2] , while others have failed to show this relationship [3]

Tabl2: lipidic and glucidic profile of the popuation

variables	Mild OSA (n=7)	Moderate OSA (n=16)	Severe OSA (n=15)	p-value
Total Cholesterol (mmol/l)	4.54±0.86	4.89±1.09	4.58±0.95	NS
Triglycerides (mmol/l)	1.15±0.9	1.71±1.01	1.29± 0.46	NS
HDL-C (mmol/l)	1.21±0.59	0.88± 0.28	0.89±0.30	NS
LDL-C (g/l)	1.08±0.26	1.25±0.32	1.2±0.37	NS
Fasting blood glucose (mmol/l)	5.80 ±1.2	7.14 ±4.21	7.16±3.11	NS
Fasting insulin (µUI/ml)	12.85±3.55	15.51±7.94	14.91±5.64	NS
HOMA-IR	3.42±1.63	4.89±3.48	5.17±3.51	NS

Fig 3: Relation between AHI and CRP hs

Fig 4 : relation between AHI and adiponectin

Fig: prevalence of type 2 DM in the obes with and without OSA

The frequency of type 2 diabetes was doubled in patients with OSA ($p=0.004$)