



# Symptoms and complaints of patients with Cushing's disease (CD) according to Moscow Region database of patients with CD

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## AIM

Aim of our study was to evaluate the frequency of symptoms of CD at baseline (before treatment) and its dependence from different parameters

## MATERIAL AND METHODS

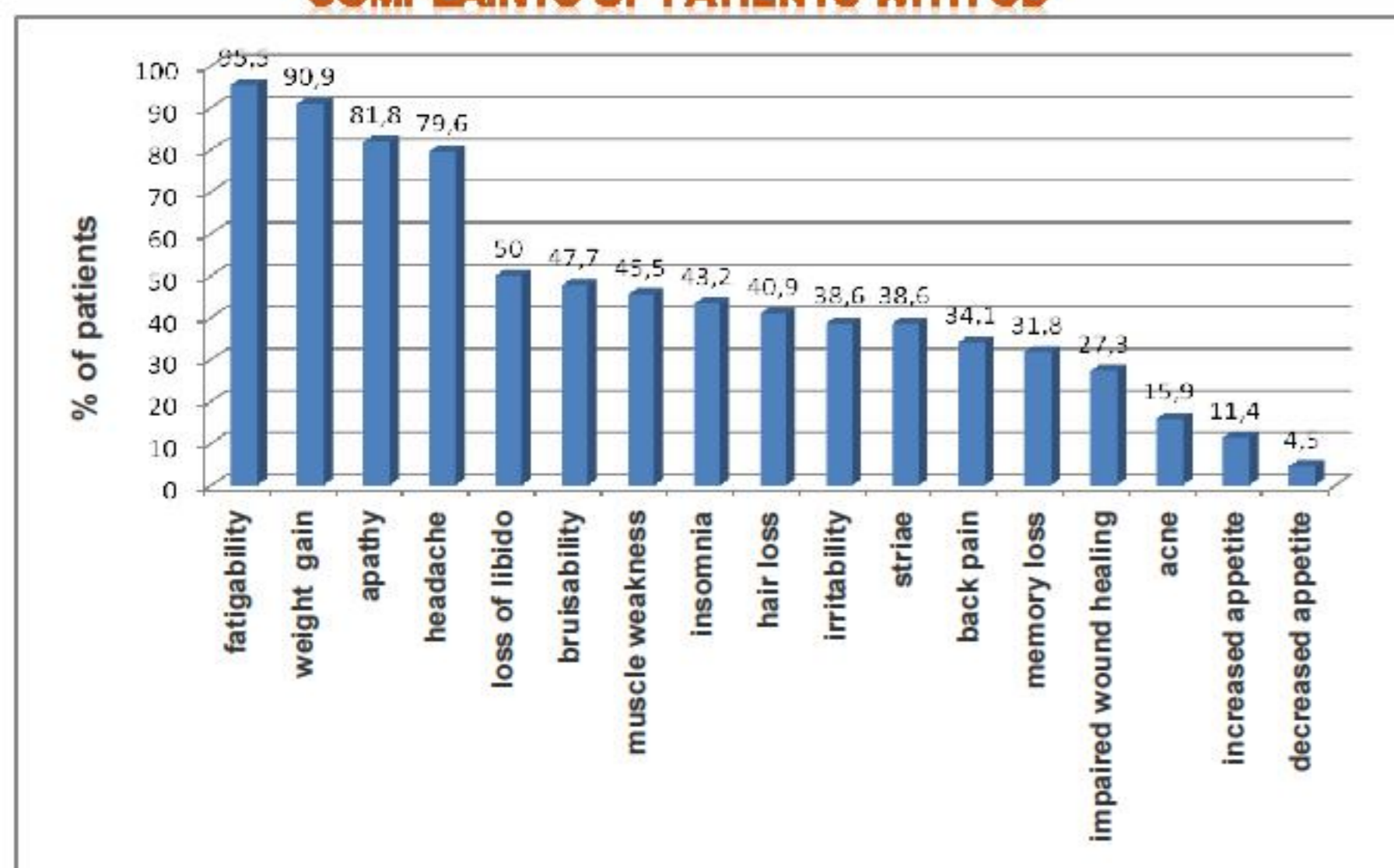
Clinical and laboratory data of 44 patients with CD (40 females, 4 males, 37.9±10.5 y.o.). Duration of the disease 35.5 [22;75] months

## RESULTS

### Complaints

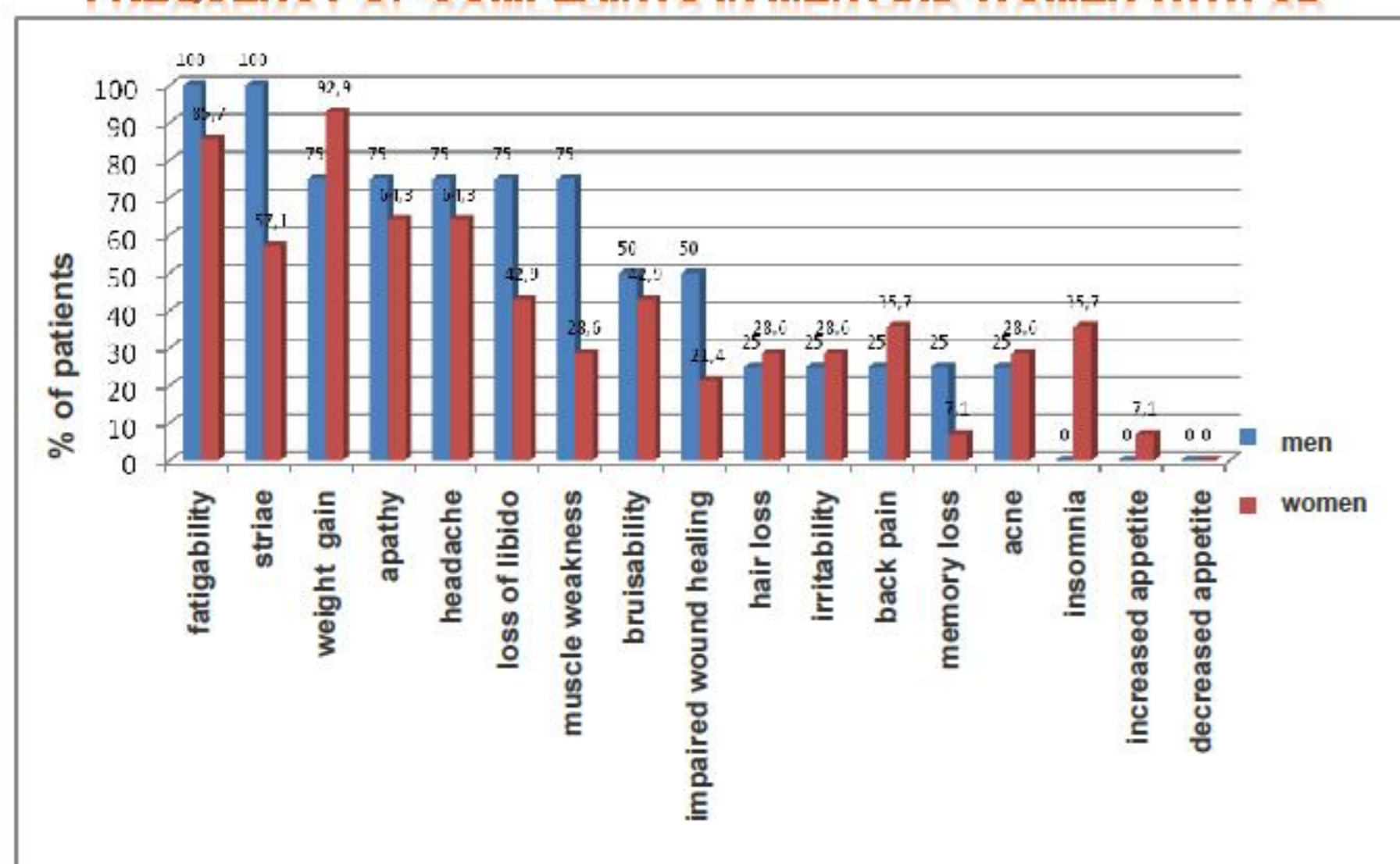
- 1) More than 80% of patients had fatigability, weight gain, apathy, headache (see picture below),
- 2) 40-50% - loss of libido, bruisability, muscle weakness, insomnia, hair loss
- 3) Less than 40% - irritability, striae, back pain\*, memory loss, impaired wound healing, increased appetite, acne.  
\* 6 from 15 (34.1%) patients with back pain had spinal fracture. One patient with spinal fracture had no back pain.
- 4) Women: regular menstruation- 5/40(12.5%), 12(30%) - menstrual irregularities, 23(57.5%)- amenorrhea

COMPLAINTS OF PATIENTS WITH CD



Some differences were found between male and female patients (see below).

FREQUENCY OF COMPLAINTS IN MEN AND WOMEN WITH CD



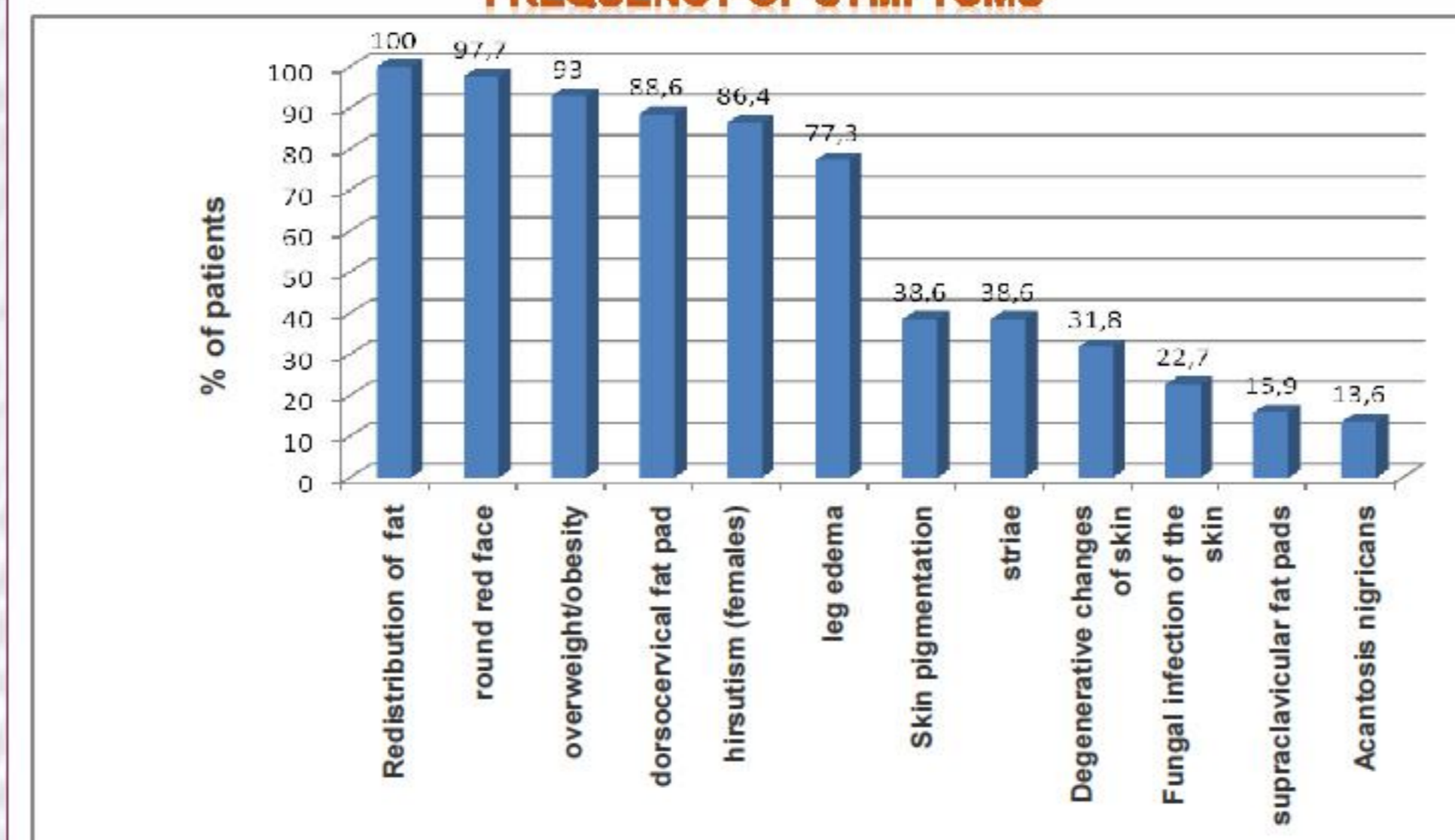
### Clinical examination

More than 70% of patients had facial plethora, overweight/obesity, dorsocervical fat pad, leg edema and hirsutism (females) (see picture below)

BMI at baseline - 33.7 [30.4; 38.4]. Normal weight in 7% of patients, 16.3% - overweight, 76.7% were obese (34.9% - I grade). Median weight gain was 13.0 [10.0;26.2] kg, correlated with duration of the disease ( $r^2=0.2$ ;  $p=0.007$ ).

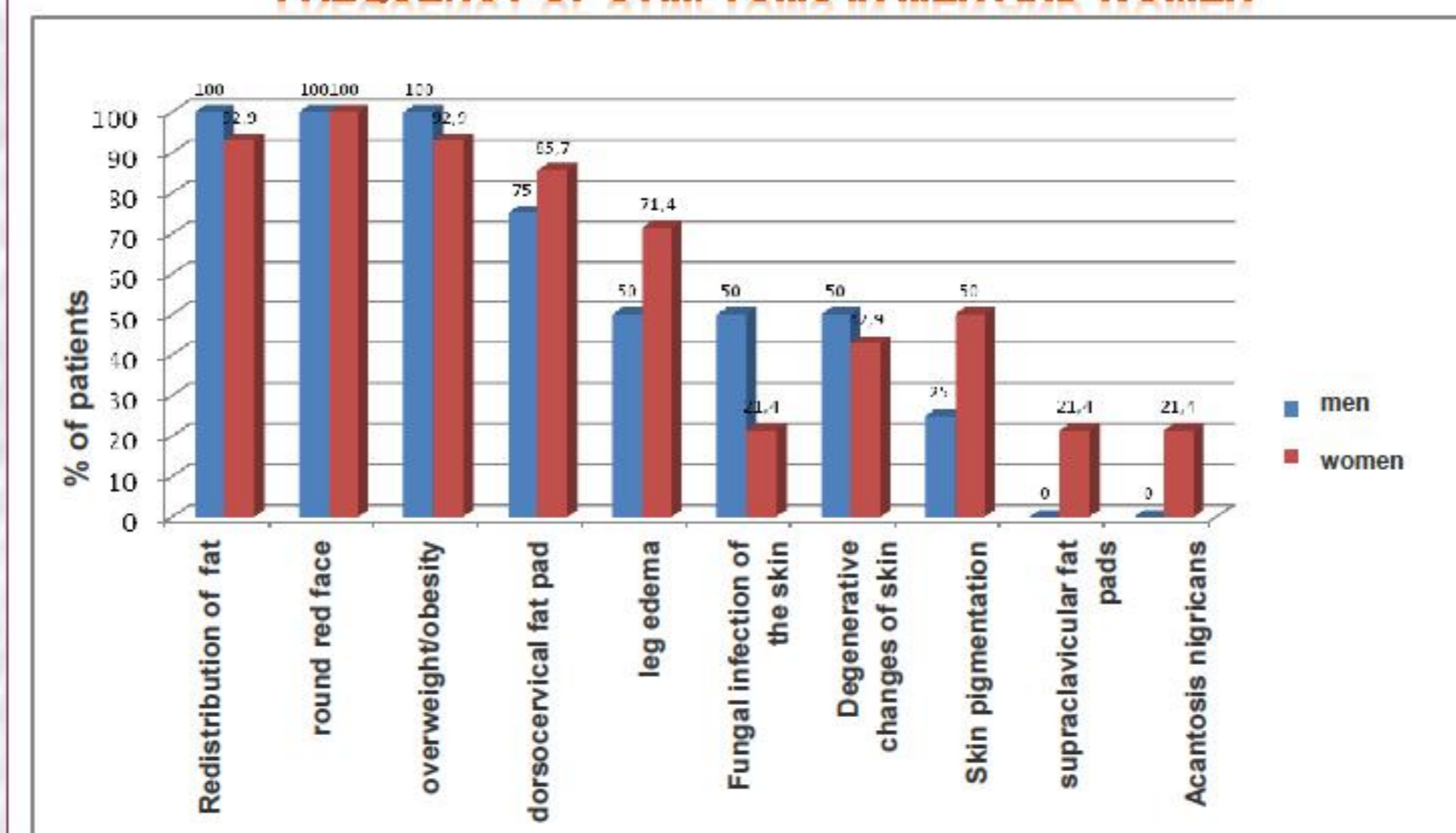
Arterial hypertension - in 100% (by BPM).

FREQUENCY OF SYMPTOMS



Differences between male and female are shown below.

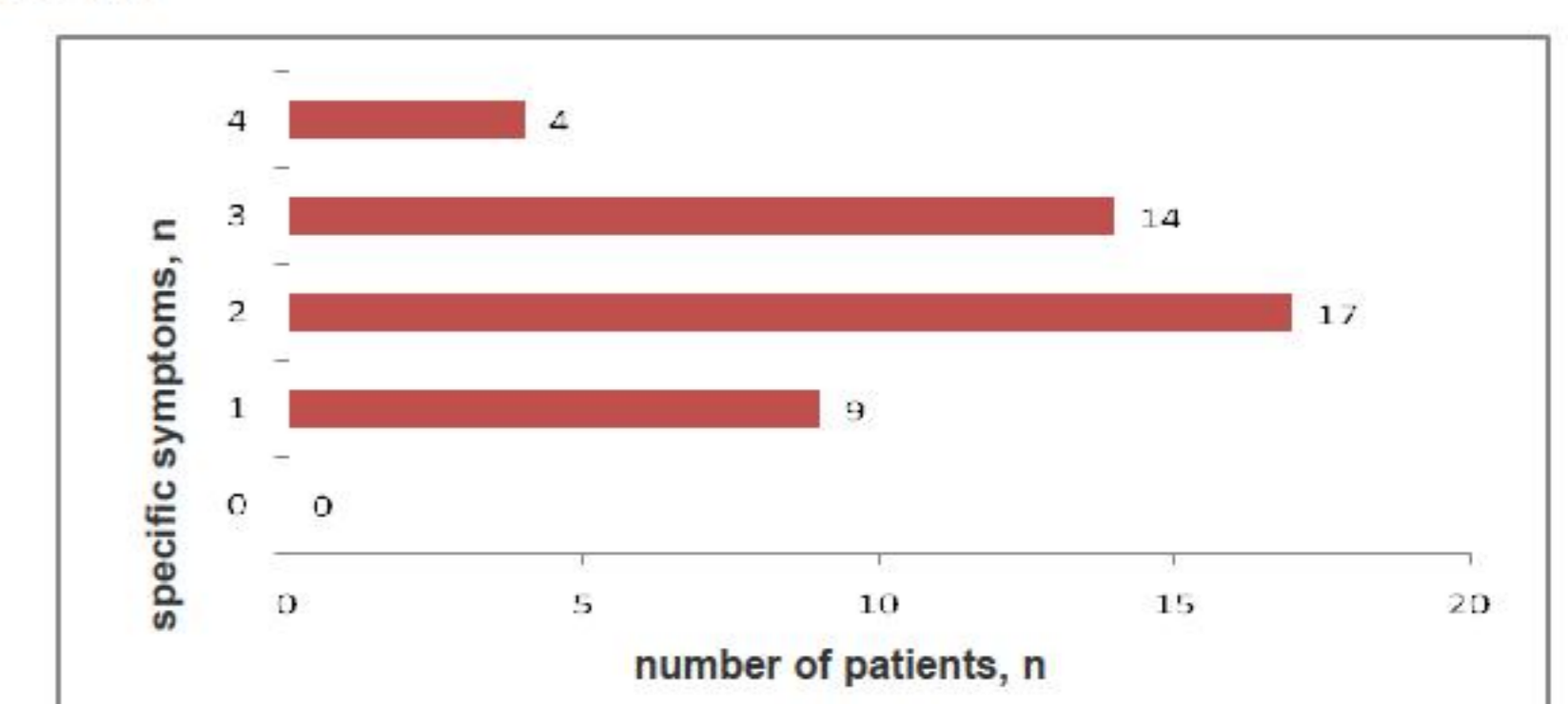
FREQUENCY OF SYMPTOMS IN MEN AND WOMEN



### Correlations

- 1) Midnight serum cortisol level and apathy, muscle weakness, hair loss, waist to hip ratio ( $r^2=0.35$ ;  $p=0.005$ ,  $r^2=0.3$ ;  $p=0.009$ ,  $r^2=0.2$ ;  $p=0.04$ , and  $r^2=0.2$ ;  $p=0.049$  respectively)
- 2) Morning serum cortisol and apathy, impaired wound healing ( $r^2=0.1$ ;  $p=0.04$ , and  $r^2=0.2$ ;  $p=0.006$ )
- 3) Morning and midnight serum ACTH levels - with increased appetite ( $r^2=0.2$ ;  $p=0.01$ , and  $r^2=0.3$ ;  $p=0.01$  respectively)
- 4) Midnight serum ACTH with fatigability ( $r^2=0.2$ ;  $p=0.03$ )
- 5) UFC with supraclavicular fat pads ( $r^2=0.15$ ;  $p=0.04$ ).
- 6) Back pain and striae correlated with BMI ( $r^2=0.1$ ;  $p=0.04$ , and  $r^2=0.17$ ;  $p=0.006$  respectively).
- 7) Weight gain and acne had a positive correlation with duration of the disease ( $r^2=0.2$ ;  $p=0.007$ , and  $r^2=0.14$ ;  $p=0.001$  respectively).

It is known that some symptoms are specific for hypercorticism. Its frequency in our patients are shown below.



## CONCLUSION

The most frequent symptoms of CD are nonspecific.  
The strongest correlation observed between symptoms and midnight serum cortisol and ACTH levels.

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