COVID-19 and metabolic syndrome

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BACKGROUND:

- Metabolic syndrome (MS) and its components contribute to severe and worse outcomes of coronavirus disease 2019 (COVID-19).
- We aimed to describe the impact of MS on COVID-19 infection.

PATIENTS AND METHODS:

- A **retrospective** study, including **COVID-19 patients**.
- Hospitalized in an infectious diseases department
- Period: November 2020 -February 2021.
- The population was divided into:
  - ✓ **G1** with MS**.**
  - ✓ **G2** without MS.
- **MS** has been defined by the **co-occurrence of three of these cardiovascular risk factors** (insulin resistance, obesity, atherogenic dyslipidemia and hypertension).

RESULTS:

- In total, **351 patients** were collected.
- **The main cardiovascular risk factors:**
  - ✓ diabetes (43.5%).
  - ✓ high blood pressure (43.8%).
  - ✓ stroke (12.8%).
  - ✓ dyslipemia (9.4%).
- **The prevalence of MS in the population** (Figure 1)

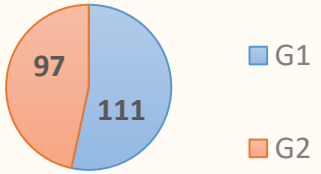

Figure1: The prevalence of metabolic syndrom in COVID-19 patients.

- The table I shows **the comparison between G1 and G2**.

Table I: The impact of metabolic syndrome in COVID-19 patients

Parameter	G1 (with MS)	G2 (without MS)	p
Age (years)	68	53	**0.009**
Smoking	34%	41%	0.1
Digestive manifestations	52%	58%	0.4
Dyspnea	80%	84%	0.6
Cough	92%	82%	**<0.01**
Acute renal failure	39%	15%	**0.07**
Severe forms (oxygen >10L/min)	72%	59%	**0.03**
Death	22%	24%	0.3

CONCLUSION:

- Based on our results, **MS** is associated with **advanced age**. MS leaded to **severe forms**. In fact, pre-existing endothelial dysfunction in MS may play a crucial role for the development of severe COVID-19.