


## INTRODUCTION

It has been suggested that endometriosis patients could present a hypercoagulable state revealing higher levels of proinflammatory and procoagulant markers, such as **circulating microparticles (cMPs)**. However, little is known about the role cMPs may play as a marker of inflammation in these patients and how this could be related to infertility problems.


**Study aim:** to investigate cMP levels in patients with endometriosis and infertility.

**cMPs:** particles  $<1\mu\text{m}$  in diameter formed by the release of membrane fragments from cells in response to damage, activation or apoptosis.



## PATIENTS AND METHODS

Prospective three branch case-control pilot study conducted in the endometriosis unit of Hospital Clinic of Barcelona.



**70 women**  
Age: 18 - 40 years



### Group 1: endometriosis + infertility

**16** women with endometriosis without hormonal treatment  $>1$  year.  $>12$  months searching for pregnancy without success.



### Group 2: endometriosis + fertile

**18** women with endometriosis without hormonal treatment  $>1$  year. Spontaneous pregnancy.



### Group 3: control group

**26** women without endometriosis. Spontaneous pregnancy.

**1.** Obtention of platelet-free plasma by double centrifugation from a venous blood sample.

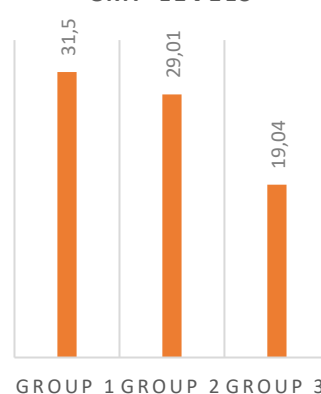
**2.** Assessment of total cMP with a commercial functional assay.

## RESULTS

Non-significant differences between the patients with endometriosis depending on their fertility status ( $p=1$ ).

Significant difference in cMPs levels between patients with infertility and endometriosis vs the control group  $p=0.03$ , but non-significant between endometriosis fertile population and control group  $p=0.70$ .

CMP LEVELS



## CONCLUSION

Higher levels of total cMP in endometriosis patients with infertility reflect a higher chronic inflammatory and/or procoagulant systemic status. cMP levels may have a role in the pathophysiological mechanisms of infertility in endometriosis. Further research is needed in this field.