

**[ERS] Increased
circulating alveolar
epithelial microparticles
in COPD patients**

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EPOC

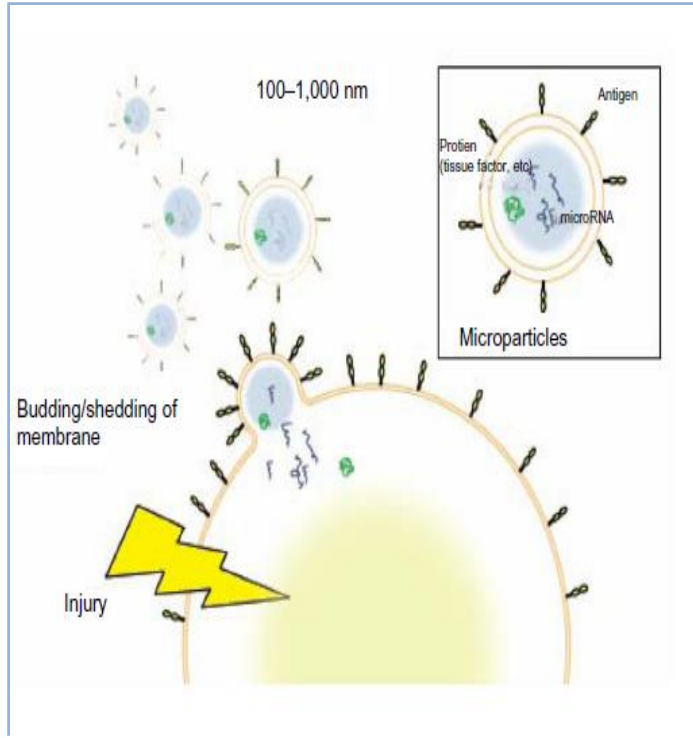
ERS

ATS

AVANCES

SEPAR





- El aumento de la circulación de MPs refleja daño endotelial.
- La circulación MPs esta aumentada en estres oxidativo, infección, ECV...
- En la EPOC están \uparrow VE-cadherin, PECAM, E-selectin.
- Existen datos que sugieren su papel en la patogénesis de enfisema.
- Es necesario estudiar su papel en la progresión de la EPOC y la incidencia de ECV.



Increased circulating alveolar epithelial microparticles in COPD patients

We hypothesized that circulating alveolar epithelium-derived MPs (Alveolar Epithelial MPs) increased in COPD patients.

Aims: To compare Alveolar Epithelial MP levels between stable COPD patients and healthy non-COPD volunteers.



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Methods: 46 stable COPD patients and 16 healthy volunteers matched with age and smoking history were enrolled. Blood samples were collected, and plasma was stained with antibodies and analyzed using FACS. Ep-CAM and E-cadherin are specific markers for epithelial cells. RAGE is highly expressed in alveolar type I cells. We defined Alveolar Epithelial MPs as follow; RAGE⁺/Ep-CAM⁺ MPs (Alveolar Ep-CAM MPs) and RAGE⁺/E-cadherin⁺ MPs (Alveolar E-cad MPs).



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Results:

- **Both Alveolar Ep-CAM and E-cad MPs were significantly higher in the stable COPD patients than in the healthy volunteers** (Alveolar Ep-CAM MPs: $p= 0.001$, Alveolar E-cad MPs: $p< 0.001$).
- **There was no significant difference** in the two Alveolar Epithelial MP levels **among the GOLD stages** although their levels in each stage were significantly higher than those in healthy volunteers.



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Conclusions: Alveolar epithelial MPs are released into the circulation in COPD patients, indicating the presence of epithelial injury and disruption of the alveolar epithelial-endothelial barrier function.

Muchas gracias
por su atención

