

ID: 3915 Presence of Annexin V, C3b, C4d, and C5b-9 in placentas of patients with Lupus, antiphospholipid síndrome and non-criteria-obstetric antiphospholipid syndrome with and without adverse pregnancy outcomes.

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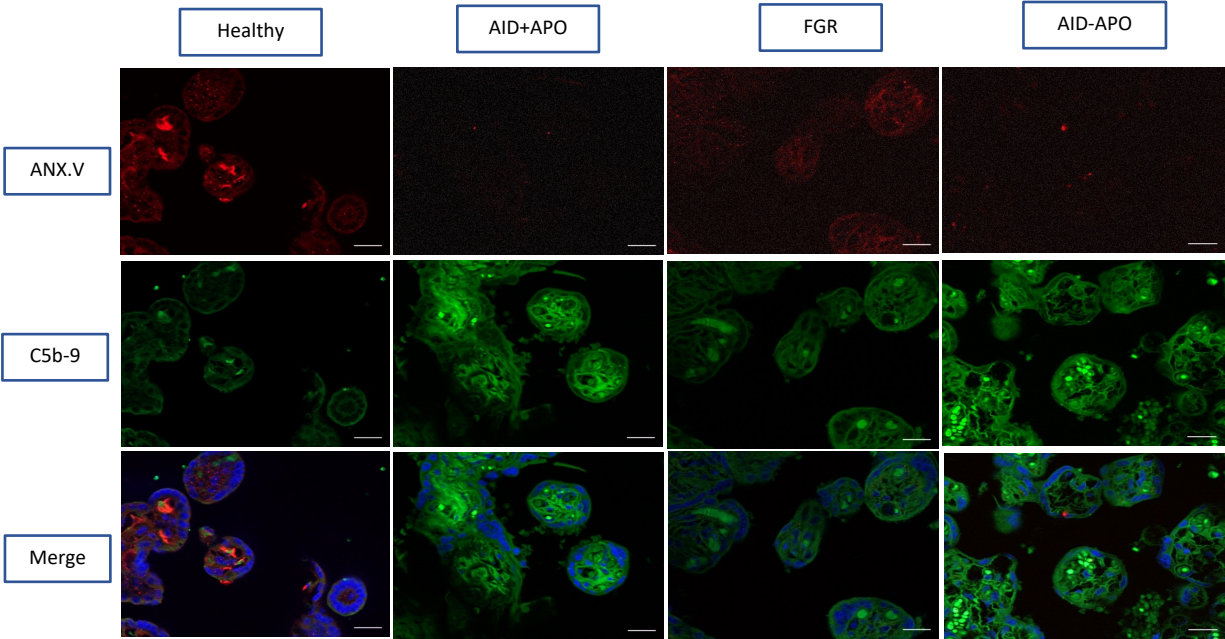
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Purpose

To compare the levels of Annexin V, C3b, C4d and C5b-9 in placentas of patients with autoimmune diseases (AID), including systemic lupus erythematosus (SLE), antiphospholipid syndrome (APS), non-criteria-obstetric antiphospholipid syndrome NC-OAPS, by the occurrence of adverse pregnancy outcomes (APO).

Materials and methods: This is an experimental study performed in the laboratory of Placenta-Jena, Germany. Placentas were collected at two centers (Hospital Clinic de Barcelona and Jena University Hospital). Indirect immunofluorescence was performed on 48 placentas. The patients were grouped into 4 different groups: controls (n=13), fetuses with fetal growth restriction (FGR)(n=13), autoimmune diseases without (n=13) and with APO (n=9). Each patient was matched with a control of the same gestational age. From each placenta, 3 mean intensity (MI) values were obtained. Linear mixed regression (MI values grouped within placentas) was performed under a random intercept model adjusted for gestational age at delivery (fixed effect).

Results: We performed a multilevel statistical study. First, we analyzed all groups in comparison with the control group and in the second analysis we focused on comparing the two groups with autoimmune diseases (AID) with and without APO. We observed that Annexin V was decreased in the AID groups with or without APO compared to the control and FGR groups, but it was not statistically significant neither in the first (FGR vs. Control P=0.194, AID-APO P= 0,229 and AID+APO P=0.058) nor in the second analyses (AID+APO vs. AID-APO P=0.321). As for C3b, we found that all groups have a significant increased C3b level compared to the control group (AID+APO vs. Control P=<0.001 and AID-APO vs. Control P=<0.001), but if we compare the two AID groups no significant changes were observed (P=0.422). C4d was significant increased in all 3 groups compared to the control group (FGR vs. control P=0.023, AIDs vs. control P=<0.001), Nevertheless, no significant changes were observed between the AID groups (P=0.619). Finally, in relation to C5b-9, we noted no changes between the control group and the FGR group (P=0.844), but it was increased in the AID groups (P=<0.001), among the AID groups no significant changes were observed (P=0.619).



FFPE, Sample tissue section. Normal, AID+APO, AID-APO, FGR Placenta, 5µm thick. 1st. Ab A: Rabbit α human Annexin- V. B: Ab Mouse α human C3b. 2nd. Ab A: AF 647 α rabbit. B: AF 488 α mouse.

Conclusions: We observed that Annexin V was decreased in the groups with AID and it is not related to APO features. On the other hand, C3b, C4d and C5b-9 were increased in relation to the control group. We did not find important differences between AID groups with and without APO.