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Mucin 5AC (MUC5AC) is a secreted gel-forming mucin which is expressed by mucus producing cells of several organs but can also be found in cancer cells of the ovary, pancreas, and gastrointestinal tract. This study aimed to characterise the expression of MUC5AC in different ovarian cancer types and its potential prognostic implications. MUC5AC expression was analyzed by immunohistochemistry on a tissue microarray containing 603 ovarian cancers. MUC5AC was commonly expressed in mucinous (27/36; 75%) and endometrioid (12/39; 31%) carcinomas, whereas malignant mixed Mullerian tumours (2/27; 7%), high-grade serous (20/373; 5%) and clear cell carcinomas (1/28; 4%) were only rarely MUC5AC positive and also showed lower expression levels. MUC5AC positive endometrioid carcinomas and high-grade serous carcinomas lacked lymph node metastases ($p=0.0495$ and $p=0.0216$) suggesting a more favourable prognosis. In summary, the results of our study show that MUC5AC expression is associated with mucinous and endometrioid ovarian carcinomas and lack of nodal metastases.

EVERYONE COUNTS: A RETROSPECTIVE COHORT STUDY EVALUATING SAFETY OF EXTENDING PRE-TRANSFUSION COMPATIBILITY TESTING (PTCT) INTERVAL

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Aim: To investigate the safety of extending the PTCT interval from 72 hours to 7 days in haematology patients receiving PRBC. We hypothesise that the rates of transfusion reactions will be similar before and after the change.

Method: All haematology patient transfusions from July 2017 to June 2019 were exported from blood management software eBlood. A total of 2079 units were analysed from 227 patients. Prior to 1 July 2018 transfusions had a 72 hour PTCT interval. Post 1 July 2018 transfusions were eligible for 7 day PTCT interval. The primary outcome was the incidence of transfusion reactions.

Results: There were 6 (0.29%) transfusion reactions across the study and all were acute (<24 hours from transfusion). These reactions occurred within the post-protocol change cohort (0.69%), although all had a PTCT interval of <72 hours. No reactions occurred within the pre-protocol change cohort.

Discussion: This study found no evidence for an increased risk of transfusion reactions associated with increasing the PTCT interval from 72 hours to 7 days. Extending the PTCT interval has the potential to decrease physical and human resource burden, decrease patient infection risk, improve patient comfort and conserve public health resources. More research is needed to further validate the safety of PTCT extension.

A MOLECULAR ALTERNATIVE TO MEASURING THE MONOCYTE INDEX FOR PATIENTS WITH COMPLEX TRANSFUSION NEEDS

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Background and Aims: The monocyte monolayer assay (MMA) provides a tool for evaluation of the significance of rare or complex antibodies by counting the uptake of antigen-positive RBC sensitised by patient's plasma. Due to the operator-intensive nature of the assay, we investigated monocyte activation at the molecular level to evaluate alternative readouts.

Methods: RNA was isolated from PBMC exposed to RBC sensitised with anti-D [monocyte index (MI) 44%]; anti-K (MI 25%); anti-Ch (MI<3%); anti-JMH (MI<3%). RNA was used for cDNA synthesis, pre-amplification and RT-PCR of 48 genes involved in activation, signalling and immune response using TaqMan Gene Expression Array Cards (Applied Biosystems). Gene expression was compared to media controls (one-way ANOVA with Dunn's post-test; $p<0.05$).

Results: Exposure to sensitised RBC resulted in upregulation of genes involved in cell adherence (*CD9*, *ICAM-1*), cell recruitment (*CCL4*) and immune regulation (*IL-1A*, *TNF*) regardless of MI. High MI was associated with differential upregulation of CD32 driven receptor binding (*FCGR2C*), cytoskeletal arrangement (*RHOA*, *RAC-1*) and chemotaxis (*CCL3*, *CCR5*).

Conclusions: These data suggest that read-outs based on receptor binding (*FCGR2C*), cytoskeletal arrangement (*RHOA*, *RAC-1*) and chemotaxis represent an alternative for evaluation of MI, rather than counting phagocytosed RBC.

ENZYME-LINKED IMMUNOSORBENT ASSAY (ELISA) FOR ANTI-D QUANTIFICATION

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Antibody screening is performed in all pregnant women in Australia to identify clinically significant red cell alloantibodies. High antibody quantification levels can indicate that the pregnancy is at higher risk of haemolytic disease of the foetus and newborn (HDFN).

Enzyme-linked immunosorbent assays (ELISA) have previously been described as a method of anti-D quantification but in the past, have required the use of sensitised red blood cells (RBC).¹ There are now commercially available plates that have wells precoated with the RhD antigen, alleviating the need for RBC. This method of testing is specific for IgG, the only immunoglobulin to cross the placenta, whereas the current Astoria method does not discriminate between IgG and other anti-D immunoglobulins, including IgM.² ELISA-based testing may