Results: TAB reports from a total of 577 patients were captured, with results available from the two centres from 1999-2019 and 2010-2019 respectively. The mean age in this group was 73, and 69% were female (Table 1). A bilateral TAB was performed in 29%, and the mean total biopsy length was 2.5cm. Of these patients, 122 had positive biopsies (21%), with intimal hyperplasia reported in 100 (17%), giant cells in 83 (14%), and adventitial findings in 68 (12%).

Positive biopsy weakly correlated with increased total length of biopsy in centimetres (OR 1.25 [1.06-1.47]) (Figure 1) and increased age in years (OR 1.02 [1.00-1.05]) but not laterality or sex (Table 2). There was a substantial difference between the two centres, which was incompletely accounted for once corrected for total biopsy length and calendar year of biopsy, suggesting either unmeasured differences in patient demographics or a difference in clinical practice. This change was preserved across analysis of different histopathological subtypes.

Discussion of Interests: None declared.

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SAT0279 FACTORS PREDICTIVE OF POSITIVE TEMPORAL ARTERY BIOPSY IN TWO AUSTRALIAN COHORTS

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Background: Temporal artery biopsy (TAB) is widely recognised as the diagnostic gold standard for GCA despite having a poor sensitivity due to the presence of ‘skip’ lesions. There is, however, a lack of consensus guiding TAB practice, particularly in relation to optimal length, need for bilateral specimens, and number of segments examined.

Objectives: To investigate the impact of factors such as total biopsied length, laterality, segment number, and referral centre on histopathological outcomes in an Australian setting.

Methods: Reports for all available biopsy specimens labelled ‘temporal artery’ were extracted from the pathology service records of two rheumatology referral centres with adjacent geographic catchments. Each histopathology report was manually reviewed to establish length of biopsied artery, laterality, and number of segments, along with patient demographics such as age, sex, and referral centre. Key histopathological findings including intimal hyperplasia, disruption of the internal elastic lamina, presence of giant cells, and adventitial inflammation were recorded. Multivariable logistic regression with site-varying intercept was performed.

Results: TAB reports from a total of 577 patients were captured, with results available from the two centres from 1999-2019 and 2010-2019 respectively. The mean age in this group was 73, and 69% were female (Table 1). A bilateral TAB was performed in 29%, and the mean total biopsy length was 2.5cm. Of these patients, 122 had positive biopsies (21%), with intimal hyperplasia reported in 100 (17%), giant cells in 83 (14%), and adventitial findings in 68 (12%). Positive biopsy weakly correlated with increased total length of biopsy in centimetres (OR 1.25 [1.06-1.47]) (Figure 1) and increased age in years (OR 1.02 [1.00-1.05]) but not laterality or sex (Table 2). There was a substantial difference between the two centres, which was incompletely accounted for once corrected for total biopsy length and calendar year of biopsy, suggesting either unmeasured differences in patient demographics or a difference in clinical practice. This change was preserved across analysis of different histopathological subtypes.

Discussion of Interests: None declared.

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SAT0280 IMPACT OF PLACENTAL FACTORS ON PREGNANCY AND FETAL OUTCOME IN SYSTEMIC SCLEROSIS

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Background: Systemic sclerosis, myositis and related syndromes are characterized by inflammation in different target organs, including the placenta. Accumulating evidence suggests an association between these conditions and foetal growth restriction and adverse pregnancy outcomes.

Objectives: To evaluate the impact of placental factors including maternal disease activity, infection and inflammation, on pregnancy and foetal outcomes in patients with systemic sclerosis.

Methods: Data from a prospective observational study of 217 women with systemic sclerosis and 120 healthy controls were analysed. The primary outcome was foetal growth restriction defined as birth weight <10th centile. Secondary outcomes included severe preeclampsia and foetal death. Baseline characteristics, disease activity, infection and inflammation were collected at each visit. The association of these factors with foetal growth restriction was evaluated using multiple logistic regression.

Results: Of 217 women with systemic sclerosis, 45% had active disease at the time of delivery. Foetal growth restriction occurred in 13% of deliveries (n=29). After adjusting for maternal and foetal covariates, the presence of active disease at delivery was associated with a 2.5-fold increased risk of foetal growth restriction (OR 2.5 [1.2-5.4]). Active disease was also associated with a 3-fold increased risk of severe preeclampsia (OR 3.0 [1.4-6.4]) and a 3-fold increased risk of foetal death (OR 3.0 [1.2-7.4]).

Conclusion: Active disease at delivery is associated with increased risk of foetal growth restriction, severe preeclampsia and foetal death in women with systemic sclerosis. These findings highlight the importance of controlling disease activity during pregnancy to improve foetal outcomes.

Disclosure of Interests: None declared.

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SAT0280 IMPACT OF PLACENTAL FACTORS ON PREGNANCY AND FETAL OUTCOME IN SYSTEMIC SCLEROSIS

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Conclusion: Active disease at delivery is associated with increased risk of foetal growth restriction, severe preeclampsia and foetal death in women with systemic sclerosis. These findings highlight the importance of controlling disease activity during pregnancy to improve foetal outcomes.

Disclosure of Interests: None declared.

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SAT0281

BIOSAMPLES FROM AT RISK SSc PATIENTS SHOW CLASSIC PATHOLOGICAL SIGNS OF SCLERODERMA: OPPORTUNITY FOR DIAGNOSIS OF PRE-CLINICAL SSc

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Background: Systemic Sclerosis (SSc) is one of the rheumatic diseases burdened with obstetrical complications. An Italian multicenter study showed that women with SSc have a higher-than-normal risk of intrauterine growth restriction, preterm delivery, very-low birth weight babies and pregnancy should be discouraged in patients with severe organ damage. However, with a multidisciplinary management, patients with SSc can have successful outcomes 1. Little is known about the pathogenesis of obstetrical complications, as studies on placenta are case reports or description of a few cases 2, 3.

Objectives: The aim of this study was to analyze the placental alterations with a focus on the role of inflammation in the pathogenesis of obstetrical complications in SSc, including the study of the atypical chemokine receptor 2 (ACKR2), involved in immune modulation and known to be highly expressed in circulating leukocytes in SSc patients 4, 6.

Methods: Eight SSc pregnant patients were compared with 16 patients with other rheumatic diseases (ORD) and 16 healthy controls (HC), matched for gestational age. Clinical data were collected. Placentas biopsies were obtained for histopathological analysis and immunohistochemistry for CD3, CD20, CD11c, CD68 and ACKR2. Frozen placenta samples from 4 SSc, 8 ORD and 8 HC were analyzed by qPCR for ACKR2 gene expression and proteins were extracted for multiplex assay for cytokines, chemokines and growth factors involved in angiogenesis and inflammation. Statistical analysis was performed with parametric or non-parametric tests depending on samples distribution.

Results: The number of placental CD3 (p=0.05), CD68 (p<0.001) and CD11c+ (p<0.001) cells was significantly higher considering the group of patients affected by rheumatic diseases (SSc+ORD) compared to HC. The SSc group alone did not show significance due to the lower sample size. No differences were observed between groups in terms of vascular alterations or fibrosis. The percentage of stained area for ACKR2 and the ACKR2 transcripts levels were comparable between groups. Hepatocyte growth factor (HGF), involved in angiogenesis, was significantly increased in the group of rheumatic diseases patients (SSc+ORD) compared to HC (p<0.05), while the chemokine CCL5 was significantly higher in SSc patients compared to patients affected by ORD (p<0.05) and to HC (p<0.01). CCL5 levels directly correlated with the number of all inflammatory cells considered and higher levels were associated to histological viliitis (p<0.01).

Conclusion: The higher number of placental inflammatory cells and the alterations in the levels of HGF and especially CCL5 could play a role in the pathogenesis of the obstetrical complications in SSc. ACKR2 does not seem involved in the obstetrical complications of SSc.

References:

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