Table 1. Clinical characteristics of 24 pediatric SAPHO patients

Skin manifestation	17/24 (71%)
Severe acne (M/F)	11/0
PPP (M/F)	0/5
None (M/F)	3/4
Psoriasis (M/F)	0/1
Nonspecific rash (M/F)	1/0
Bone manifestation	24/24(100%)
Pain	24 (100%)
Swelling	17 (71%)
Restricted function	19 (79%)

Table 2. Effect of different treating choices for 24 pediatric SAPHO patients

Medications	Remission	Partial response	No response	Total
NSAIDs	3	3	0	6/24
Bisphosphonates	7	2	1	10/24
TNF- α antagonist	7	3	0	10/24
Glucocorticoids	0	1	0	1/24

Conclusion: This is the first Chinese cohort of pediatric SAPHO patients. Their bone lesions could be divided into 4 types, anterior chest wall, mandible, peripheral bones and spinal bones. We also provide evidence that bisphosphonate and TNF- α antagonist are useful for pediatric SAPHO treatment.

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FRI0601

SERUM IMMUNOGLOBULIN G4 LEVEL IN INHEPATITIS B WAS HIGHER THAN AUTOIMMUNE LIVER DISEASE IN A CHINESE POPULATION

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Background: High serum level of Immunoglobulin G4 (IgG4) was detected in autoimmune hepatitis (AIH), but little was known in other types of hepatitis such as hepatitis B, primary biliary cholangitis (PBC) and primary sclerosing cholangitis (PSC).

Objectives: The aim of this study is to evaluate the level of serum IgG4 in hepatitis B and autoimmune liver disease.

Methods: Hepatitis B and autoimmune liver disease patients were enrolled between January 1st and August 30th 2018. Diagnosis of Hepatitis B, AIH, PBC and PSC was basing on corresponding classification criteria, and established IgG4 related diseases were excluded. The levels of serum IgG4 were determined by nephelometric assay. The cut-off value of serum IgG4 was 2.01 g/L. Serum IgG4 among different liver diseases were compared.

Results: 161 HBV hepatitis and 112 autoimmune liver diseases (52 AIH, 57 PBC, 3 PSC) were enrolled in this study. The HBV hepatitis patients were younger than patients with autoimmune liver disease (44.79 $\pm$ 12.56 vs 52.52 $\pm$ 11.16 years old). In total, 61 patients (22.34%) had elevated serum IgG4 level. IgG4 level in HBV hepatitis was significantly higher than in AIH, PBC, respectively (1.64 $\pm$ 1.80 vs 1.11 $\pm$ 1.16, 1.64 $\pm$ 1.80 vs 0.96 $\pm$ 0.87 g/L, $P < 0.05$).

Conclusion: High serum IgG4 was very common in liver diseases without IgG4 related diseases especially in HBV hepatitis. Differential diagnosis should be made in patients with hepatitis accompanied with high serum IgG4.

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FRI0602

SERUM ALBUMIN PREDICTS ONCOLOGICAL OUTCOMES BUT NOT RHEUMATIC IMMUNE-RELATED ADVERSE EVENTS FOLLOWING PD-1 INHIBITOR THERAPY

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Background: Rheumatic immune-related adverse events (irAEs) following immune checkpoint inhibitor (ICI) therapy for cancer are an increasing burden on rheumatological services but have also been associated with subsequent good oncological outcomes(1). A clinical need for biomarkers to predict rheumatic irAEs exists. High serum albumin and low lactate dehydrogenase (LDH)(2) prior to ICI therapy has been associated with subsequent good oncological outcomes, and may therefore predict rheumatic irAEs, but to the best of our knowledge this has not previously been examined.

Objectives: To determine the relationship between serum albumin and LDH of immune-related adverse events (irAEs) and oncological outcomes following treatment with the main classes of ICI therapy for cancer, programmed cell death protein 1 (PD-1) inhibitors and programmed death-ligand 1 (PD-L1) inhibitors.

Methods: We retrospectively examined all patients at a single centre who had a serum albumin performed in the institutional laboratory before treatment with a PD-1 or PD-L1 inhibitor before January 1, 2018, with follow-up until October 1, 2018. Patients with any diagnosis of a rheumatic irAE were identified. Treatment response was determined based on assessment by the treating oncologist, with favourable oncological response defined as complete or partial response. Statistical tests were performed using two-tail t-tests. Missing laboratory values were imputed using median imputation.

Results: There were 401 episodes of therapy which met criteria, of which 324 had a serum albumin level and 244 had serum LDH prior to the commencement of therapy. A rheumatic irAE was diagnosed in 26 of the 401 patients (6.5%) and a good oncological response was noted in 140 patients (34.9%). There was a statistically significant relationship between higher baseline serum albumin and favourable oncological response ($p < 0.001$), but not with the development of a rheumatic irAE ($p=0.41$)(Table 1). Although serum LDH levels were lower in those with favourable oncological response, this relationship was not statistically significant ($p=0.16$). Similarly, LDH levels were lower on average in those who subsequently developed a rheumatic irAE, however this relationship was not statistically significant ($p=0.57$).

Conclusion: High serum albumin was associated with good oncological outcomes following ICI therapy with a PD-1 or PD-L1, but not with rheumatic irAEs. The reason for this dissonance is not clear. Not all markers of good oncological response predict rheumatic irAEs and further study should focus on consequent implications for rheumatic irAE pathophysiology.

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