

Table S1. TCR V β profiles from tonsil CD4⁺ or CD8⁺ T cells of RT or OSA patients relative to healthy reference values or normalised against peripheral blood. Each line represents the profile from an individual patient.

Pathogen ¹	TCR V β skewing versus reference values		Staphylococcal Superantigen		CD4 ⁺ TCR V β skewing tonsil/blood (fold change)	
	CD4+	CD8+	Gene/Gene Cluster	Mitogenicity	≥ 1.5	≤ 0.5
RT						
<i>S. aureus</i>	-	-	<i>selx</i>	-	-	-
	-	-	<i>seb</i>	+++	-	16, 20
	-	5.3	<i>selp, selx</i>	+++	1	-
	-	-	<i>selx</i>	-	13.2	20
³	7.1, 14	18	<i>seg, sell, selx, egc</i>	+	5.3, 7.1, 9, 14	-
GAS (<i>emm28</i>) ³	2, 4	2, 18	<i>speC, speG, smeZ</i>	+++	2, 4, 8, 23	14
GAS (<i>emm89</i>) ³	16	18	<i>speG, smeZ</i>	++	5.3, 7.2, 16	-
GAS (<i>emm89</i>)	-	16, 18, 22, 23	<i>speG, smeZ</i>	++	-	13.2
StG62647	3, 4, 23	-	n/a	n.d.	14, 20	-
	-	-	n/a	n/a	-	18, 23
	2	16	n/a	n/a	22	18
	-	-	n/a	n/a	-	7.2, 20
	-	5.2, 5.3, 13.1, 18	n/a	n/a	23	1
	-	17	n/a	n/a	-	-
	-	-	n/a	n/a	5.3	23
	-	1	n/a	n/a	-	7.2
	-	18, 23	n/a	n/a	-	7.1, 20
	2	-	n/a	n/a	-	20
	-	-	n/a	n/a	-	18, 20
	-	5.1	n/a	n/a	-	-
	-	-	n/a	n/a	7.2, 13.2, 23	-
	-	11, 13.1, 23	n/a	n/a	18, 23	-
	12	12, 13.1	n/a	n/a	-	7.2
Hyperplasia						
<i>S. aureus</i>	-	-	<i>selx</i>	-	-	-
	-	1, 5.3, 16	<i>sec, seg, sell, selx, egc</i>	+++	14, 18	7.1
	-	22	<i>sed, seg, selx, egc</i>	+++	-	7.1, 7.2
	8	-	<i>seg, selx, egc</i>	+++	-	-
	-	-	<i>seg, selx, egc</i>	+	-	-
	-	-	<i>selx</i>	-	-	-
	-	-	<i>sea, seg, selx, tsst-1</i>	-	-	-
	2, 13.2	5.3, 13.2, 18, 23	<i>sec, sell, selx, egc</i>	+++	12	23
	-	7.1, 18	<i>selp, selx</i>	-	-	18, 23
	-	-	<i>seg, selx, egc</i>	++	-	-
<i>S. aureus</i> & StG245	23	-	<i>sec, seg, sell, selx, egc</i>	++	23	3, 7.2, 12, 14, 16, 20, 21.3

<i>S. aureus</i> & StC47A	2, 5.1	-	<i>selp, selx</i>	+	23	-
<i>S. aureus</i> & StG62647	-	1	<i>seb, sec</i>	+++	-	-
Stg6792	-	18, 22, 23	n/a	n/a	-	-
	-	-	n/a	n/a	20	-
	-	9	n/a	n/a	-	-
	-	5.3	n/a	n/a	-	7.2, 14, 20
	2	-	n/a	n/a	7.2	-

¹Detected by culture ; ²Skewing of the same TCR V β family members across CD4+ and CD8+ T cells and/or also increased relative to peripheral blood values are highlighted in bold font; ³Isolates used for additional TCR V β profiling; n/a = not applicable

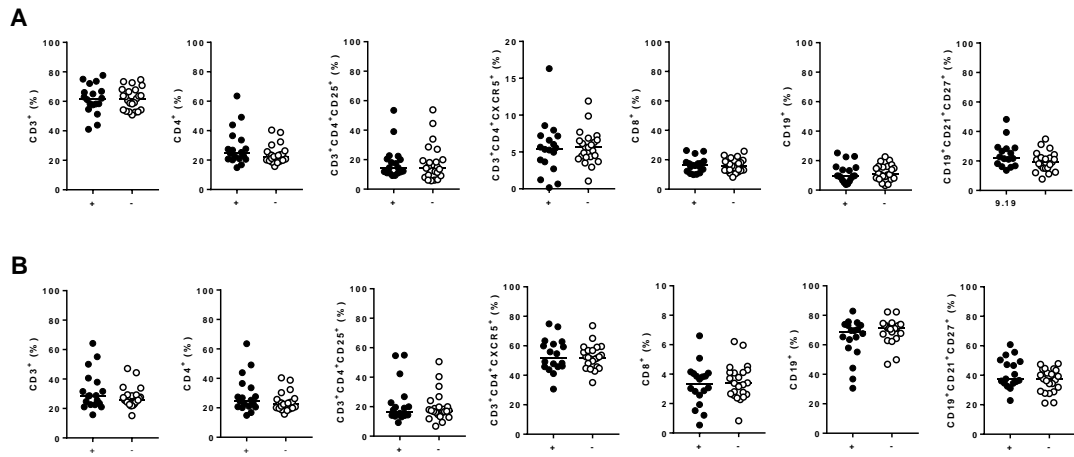


Figure S1. Presence of *S. aureus* in tonsil tissue does not alter major T and B cell subsets. Profiling of major immune cell subsets in peripheral blood (A) and tonsil tissue (B) in patients identified as culture positive (+) or negative (-) for *S. aureus*. Each point is a value from an individual patient and the horizontal line is the median. The two patient groups were compared with a two-tailed Mann-Whitney test or unpaired t-test.

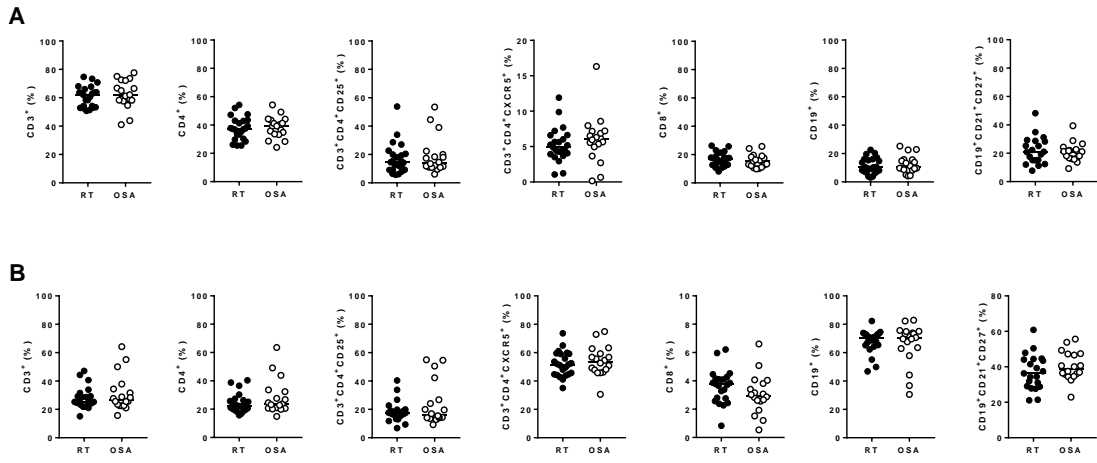


Figure S2. Major T and B cell subsets are comparable in RT and OSA patients. Profiling of major immune cell subsets in peripheral blood (**A**) and tonsil tissue (**B**) in RT and OSA patients. Each point is a value from an individual patient and the horizontal line is the median. The two patient groups were compared with a two-tailed Mann-Whitney test or unpaired t-test.

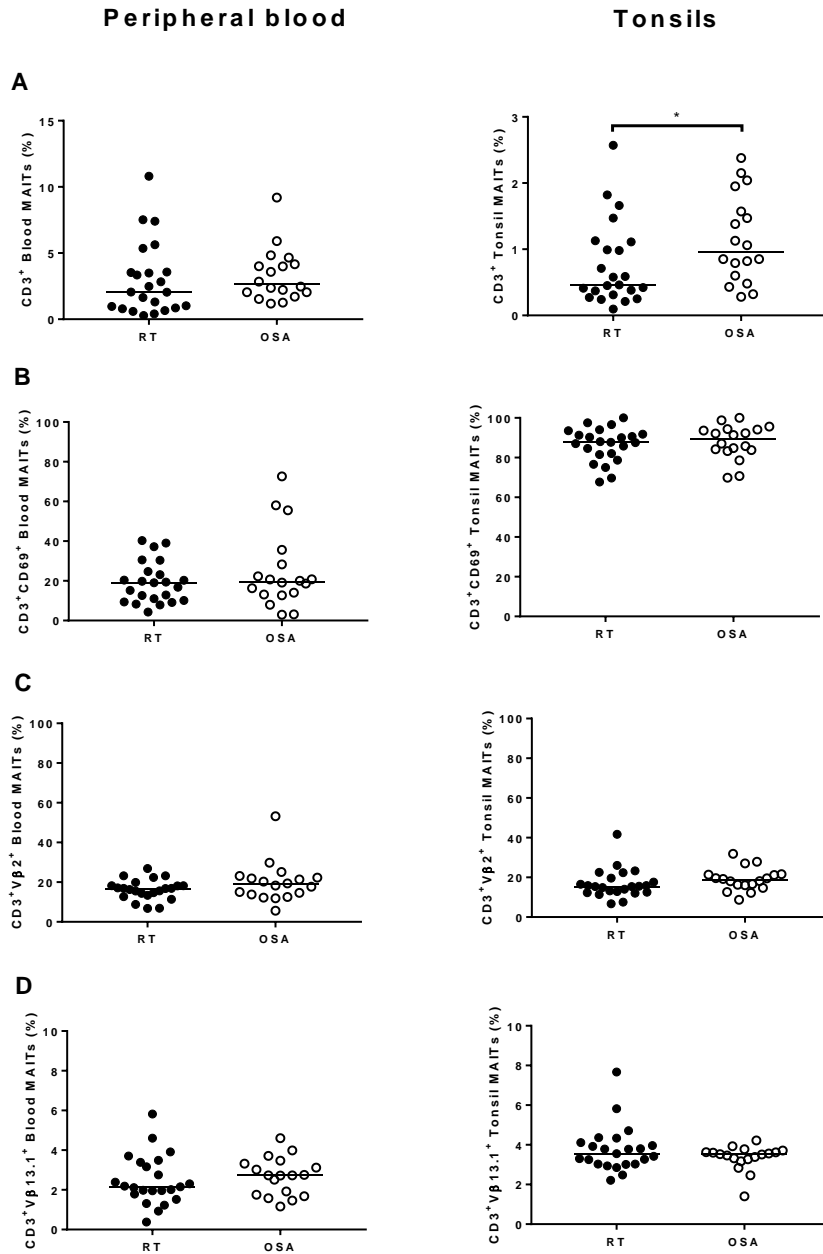


Figure S3. Characterisation of MAIT cells in RT and OSA patients. A comparison of CD3⁺CD161⁺Vα7.2⁺ MAIT in patients with RT or OSA. These cell populations were quantified in blood or tonsil tissue (A) and then assessed for expression of CD69 (B), TCR Vβ2 (C) and TCR Vβ13.1 (D). Values are expressed as a percentage of CD3⁺ cells. Each point is a value from an individual patient and the horizontal line is the median. The two patient groups were compared with a two-tailed Mann-Whitney test.