

**P0909**

**Paper Poster Session**

**Microbial colonization and infection of the skin**

**Impact of oral and nasal colonization on infected eczema in children: results from the CREAM (ChildRen with Eczema, Antibiotic Management) study**

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**Background:** As part of the CREAM study we aimed to determine the association between oral and nasal colonisation with *Staphylococcus aureus* and streptococcal isolates and infected eczema. Children with infected eczema are often prescribed antimicrobials alongside corticosteroids, with topical fusidic acid, oral flucloxacillin and erythromycin being the most common.

**Material/methods:** 113 baseline nasal, oral and infected eczema swabs were analysed for *S. aureus* and groups A, B, C & G streptococci. Resistance to flucloxacillin (FOX) in *S. aureus* was performed by EUCAST disc testing whilst resistance to fusidic acid (FA) (*S. aureus*), penicillin (streptococci) and erythromycin (ERY) (*S. aureus* & Streptococci) was determined by agar dilution using IsoSensitest agar and BSAC/EUCAST breakpoints.

**Results:** 79/113 (69.9%) infected eczema swabs contained *S. aureus* (78) or groups A, B, C, G Streptococci (11). Overall of the 79 patients with infected eczema, 43/79 (54.4%) were colonised with either *S. aureus* or streptococcus sp. 78 infected eczema swabs contained *S. aureus* and 11 contained streptococci (6 gp A, 4 gp B & 1 gp G). Colonisation with *S. aureus* was found in 41/78 (52.6%) patients with *S. aureus* also in the infected eczema (Fig 1). Colonisation with streptococci gps A, B, C & G was found in 3/11 (27.3%) patients with streptococci also in infected eczema. In *S. aureus*, resistance to methicillin, erythromycin & fusidic acid is shown in Table 1. Colonising streptococci from patient with infected eczema exhibited no penicillin or erythromycin resistance.

**Conclusions:** *S. aureus* and Groups A, B, C, G streptococcus isolates were found in 69.9% of infected eczema wounds. In patients with infected eczema, no significant association was found between oral & nasal colonisation with *S. aureus* and/or streptococcus gps A, B, C, G. Antimicrobial resistance was similar in isolates colonising nasal or oral cavities and infected eczema.

Figure 1: Numbers of *S. aureus* colonising nasal and oral cavities in patients with infected eczema.

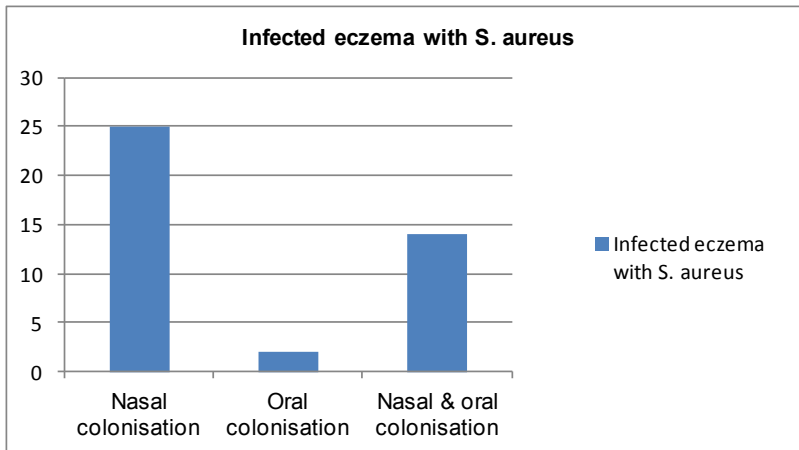


Table 1: Antimicrobial resistance of *S. aureus* isolates from infected eczema and oral/nasal cavities.

<i>S. aureus</i> in	FOX	ERYTHROMYCIN				FUSIDIC ACID			
	% resistance	MIC range	MIC <sub>50</sub>	MIC <sub>90</sub>	% R	MIC range	MIC <sub>50</sub>	MIC <sub>90</sub>	% R
Infected eczema	2.6%	0.25-64	0.25	4	11.5%	0.06->128	0.12	8	26.9%
Nasal cavity	2.6%	0.25-64	0.25	0.25	15.4%	0.06-16	0.12	8	31.3%
Oral cavity	0%	0.25-8	0.25	4	18.8%	0.06-16	0.12	8	25.6%