G37(P) LABORATORY CORRELATES OF SEVERITY IN ACUTE BRONCHIOLITIS OF INFANCY

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Introduction Respiratory viral infections cause significant morbidity and mortality in infants; approximately half of which are associated with respiratory syncytial virus (RSV) infection. Severe bronchiolitis has been associated with an aberrant host response to viral replication. We investigated the patient characteristics, immune response and viral load in bronchiolitis.

Methods We recruited patients <2 years of age presenting to St Mary's Hospital between October 2016–March 2017 with a clinical diagnosis of bronchiolitis. We recruited 55 hospitalised babies; grouped into moderate (n=34) and severe (n=21) based on their need for invasive respiratory support. Respiratory samples were collected up to twice daily using nasosorption and nasopharyngeal aspiration (NPA) along with severity scores (PEWs, M-WCAS, and RESVINET). Viral load was determined by qPCR (Primer Design, UK), immune mediators were quantified by MSD (MSD, Rockville, USA).

Results Younger age, lower weight and more co-morbidities were observed among severe cases; 50% had apnoea on presentation. Taking disease duration into account, viral load was observed to be significantly lower in severe RSV cases, compared to moderate cases, although decline in viral load was quicker (table 1).

Levels of IFN- γ and CXCL10/IP-10 were significantly higher in moderate versus severe cases. Levels of many inflammatory mediators (including type-II cytokines) were not significantly different between groups whilst mucin levels were elevated in severe cases.

Conclusion A strong innate anti-viral immune response early in disease may protect against severe RSV disease, despite higher viral load. Detailed study of airway mucosal responses to infection may clarify determinants of severity in bronchiolitis.

Abstract G37(P) Table 1 Clinical characteristics and virology in infants with viral bronchiolitis

	Moderate cases (n=34)	Severe cases (n=21)	P-value
Age (days) median (range)	180 (30–630)	56 (15–630)	0.028*
Sex (male:female)	21:13	13:8	>0.999
Wt (kg) median (range)	7.3 (4.38–12.8)	3.9 (2.2–13.7)	0.0057*
Prematurity n (%)	11 (32)	7 (33)	>0.999
Other co morbidity n (%)	11 (32)	15 (71)	0.006*
Length of hospital stay median (range)	2 (0.5–7)	14 (3–38)	<0.0001*
Time between symptoms and admission median (range)	3 (0–15)	3 (0–15)	0.33
RSV positive n (%)	18 (53)	12 (57)	0.788

G38(P) HOW MUCH IS THAT DOGGY IN THE PICU? THE ROLE OF A REGISTERED THERAPY DOG IN PAEDIATRIC INTENSIVE CARE

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The objective of the paper is to share our experiences using a Therapy Dog in our service and to demonstrate the benefits it can bring to patients and staff.

Animals can play a valuable part in alleviating stress in many situations. Paediatric Intensive Care Medicine poses a unique set of challenges, not only in terms of clinical management but also in terms of the amount of emotional support that patients, their families and staff members require. The North West and North Wales Paediatric Transport Service (NWTs) is a specialised team that deals with the stabilisation and transfer of critically ill children. Communicating with families during transit and after arrival to PICU can be challenging, clinical information needs to be relayed during a very stressful period. To address this problem, we have produced a photo book for families to read to their children. It tells the story of a curious pug, Alfie, who is invited to join the NWTs team to find out what happens when a child is ill and needs to go to intensive care.

Alfie is a therapy dog registered with Pets As Therapy UK, he has been assisting the critical care team in communicating with children and their families. He also has sessions whereby staff members who need help and support coping with stressful situations can spend time with him. Alfie also frequently visits the PICU and wards at the Royal Manchester Children's Hospital and offers support to numerous children undergoing treatment.

In order to assess how the information booklet was perceived and the impact that Alfie's sessions have had on individuals we handed out feedback questionnaires to families and staff. The feedback was universally positive, leading to the conclusion that a registered therapy animal can be beneficial to both staff and patients in a PICU setting.

G39(P) A TEENAGER WITH A PANIC ATTACK AND HOW IT UNFOLDED

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A 14 year old boy presented to a Paediatric Assessment Unit with shortness of breath and chest pain. He had never been seen in primary or secondary care before. His first medical attendance was to A and E with these symptoms 8 days earlier, when he was started on amoxicillin for a suspected chest infection. He was pale, tachypnoeic and hypertensive. The initial impression was that he might be having a panic attack.