Infection prophylaxis

Some paediatric issues

ALL 2003 Mortality January 2007

Cause	N
Bacterial Infection	19
NEC with sepsis	3
Fungal Infection	7
Viral pneumonitis	2
Encephalopathy	2
Intracranial bleed	3
Second Malignancy	1
Thrombosis	1
Refractory ALL	1
Post BMT	2

General issues

- Don’t take kindly to isolation
- Don’t take kindly to a bucketful of tablets
- Recover quicker
- Periods of neutropenia generally shorter
- May be more often dealing with patients with background of longstanding immune dysfunction
  .
- Smaller and therefore cheaper !!
- GIT stops working easily

High risk groups

- Downs
- AML
- HSCT with GVH
- Previous Aspergillus
- Background of immune deficiency
- Fanconi Anaemia

PCP

- Don’t forget it
- Myth that Septrin prophylaxis interferes with engraftment
- Use throughout graft if at high risk (HSCT in ALL)

Viruses

- More common
- Encourage general immunisation measles becoming a risk
- Acyclovir or Igglob prophylaxis for VZ contacts
- CMV more important in donor choice

Viral prophylaxis

- We follow CMV by PCR weekly if at risk
- No other as routine apart from Adeno in high risk grafts .
- BK in Haem cystitis .
- RSV/paraflu etc if clinically indicated
- EBV as above
- Tend to look harder for those viruses where we have evidence of effective therapy .
- Probably single most important factor is state of immune system

Antibiotic prophylaxis

- Not in routine use in UK
- Concerns about toxicity of quinolones ? Long term
- Emergence of fungal infection
- Most evidence from adult studies

Fungal prophylaxis

- Only in high risk settings AML and HSCT
- Usually Itraconazole
- Very rapid switch to Ambisone which is often used alternate day in very high risk patients
- Galactomannan not in routine use but most centres CT quickly and regularly
- Risk of old building/demolition

Fungal disease

- Still usual baseline is Ambisome but would often use two agents if proven disease .
- Voriconazole can be difficult in children produces visual disturbance that can be very frightening .

Nutrition

- More likely to get better if fed !
- We get off immunosuppresion asap ,
- If a graft for malignancy and no GVH then sometimes before discharge
- Keep isolated at home until see Tcell recovery
- IV Igglob only in high risk grafts

Targeted therapy

- Look at risk factors
- Most ALL would get Septrin only even during intensification
- Monitor by CT scan for Aspergillus
- By PCR for CMV
- Little else as routine

Interim Results of AIEOP of BFM 2000 (median f/up 30 months

	All Patients		BFM Standard Risk (UK MRD Low Risk)	
	N	**%**	**N**	**%**
Eligible	4171	100	1241	29.8
CCR	3709	88.9	1191	96
BM Relapse	225	5.4	16	1.3
CNS Relapse	47	1.1	7	0.6
Testes Relapse	21	0.5	3	0.3
BM & CNS	21	0.5	3	0.2
BM &	13	0.3		0.2