

Febrile Neutropenia Guidelines

Febrile Neutropenia

Temperature $\geq 38^{\circ}\text{C}$ on at least one occasion; Neutrophil count $< 0.5 \times 10^9/\text{l}$.

(Isolation, nursing and dietary protocols for neutropenic patients generally apply to patients with neut $< 0.5 \times 10^9/\text{l}$. This febrile neutropenia antibiotic protocol may be applied to patients with higher neutrophil counts depending on their individual circumstances (e.g. $< 1 \times 10^9/\text{l}$)



Mandatory Tests

FBC, U&Es, LFTs, Peripheral blood, Central line blood and urine cultures, other sites as indicated, Obs.



Initiate Treatment

Start empiric treatment immediately according to treatment group

Consider G-CSF as per NLCN guidelines

<http://www.nlcn.nhs.uk/>

No.	Treatment Group	Treatment
1	<ul style="list-style-type: none"> ⌚ All haematology patients except myeloma ⌚ All Autograft/Allograft patients ⌚ All oncology patients except high-risk neuroblastoma and sarcoma 	Tazocin + Gentamicin +/- Teicoplanin* Stop gentamicin after 2 doses if negative cultures
2	Sarcoma, myeloma, neuroblastoma patients and group 1 patients with GFR < 40ml/min	Tazocin + Ciprofloxacin PO +/- Teicoplanin* (give PO ciprofloxacin unless suspect poor absorption)
3	Patients' concurrently treated with high-dose methotrexate	Avoid Penicillins ceftazidime

*Include Teicoplanin first-line in patients at high risk of Coagulase Negative Staph Infection, e.g. endoprosthesis, tunnel infection, rigors with central line access, previous history of colonised line

Consider line removal if tunnel infection

Patients should be reassessed at 24 hours and daily thereafter

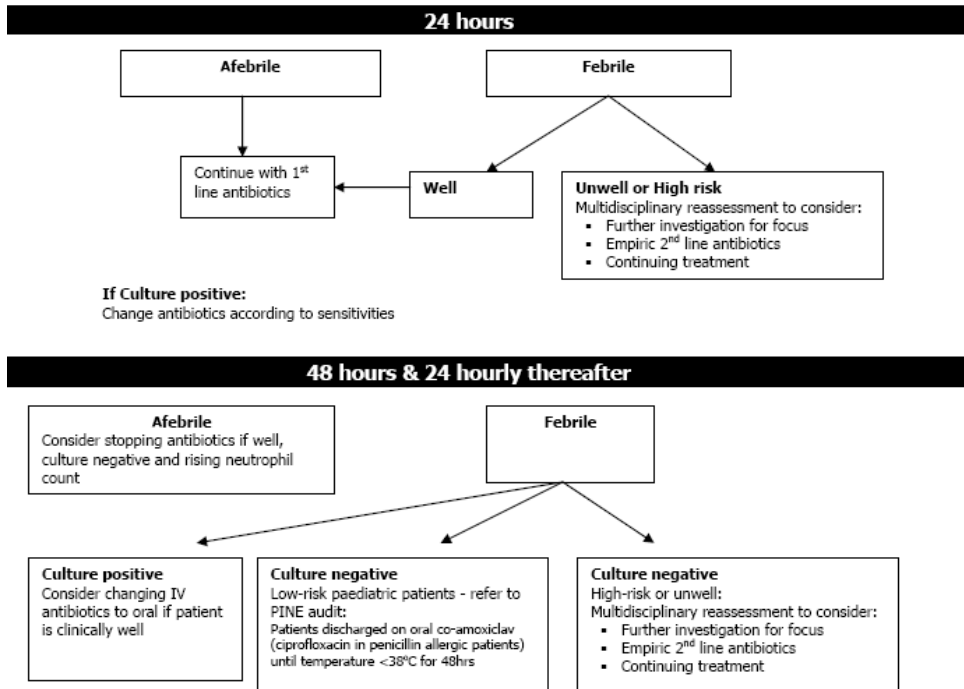
Drug Doses:

Dose by body weight for patients less than 40kg

Drug	Adult (13 + yrs) Dose	Paediatric (1 month to 12 yrs) Dose	Comments
<u>Tazocin</u>	4.5g IV TDS	90mg/kg (max 4.5g) TDS	Dose reduce in renal impairment
<u>Teicoplanin</u>	400mg IV BD for 3 doses then OD	10mg/kg (max 400mg) for 3 doses then OD	Dose reduce in renal impairment
<u>Gentamicin</u>	7mg/kg (IBW) IV OD	7 mg/kg (IBW) OD (see separate protocol if patient < 6 months)	See <u>Hartford Nomogram</u>
<u>Ciprofloxacin</u>	500mg PO BD 400mg IV BD	15mg/kg (max 500mg) PO BD 5mg/kg (max 400mg) IV BD	Dose reduce if GFR < 20ml/min
<u>Ceftazidime</u>	2g IV TDS	50mg/kg (max 2g) TDS	Dose reduce if GFR < 50ml/min
<u>Meropenem*</u>	500mg IV TDS	20mg/kg (max 1g) TDS	Dose reduce in renal impairment
<u>Amikacin</u>	20mg/kg IV (IBW) OD	20mg/kg (IBW) OD	Max dose 1500mg Take levels 20 hrs post dose Re-dose when levels < 5mg/L

* Meropenem should only be initiated after microbiology advice sought

Management Review of Patients with Febrile Neutropenia on Antibiotics



In those patients not already on antifungals (e.g. R3 relapsed ALL protocol), consider adding antifungals at 96 hours if the patient is unwell. Refer to Antifungal policy.

Duration of antibiotics in special circumstances

Line infection; culture positive or negative with response to antibiotics:

Treat for 10 days

Line infection with line removal:

Culture negative – stop antibiotic treatment according to clinical circumstances

Culture positive – consider further treatment depending on organism. Discuss with microbiologist

References

1. Marik et al (1991) JAC 28: 753-764
2. Maller et al (1993) JAC 31: 939-948