RITUXIMAB for autoimmune diseases

An option in immune (idiopathic) thrombocytopenia purpura (ITP) and auto-immune haemolytic anaemia (AIHA)

CCG funded – depending on CCG, blueteq registration is required before treatment may start

All patients should be screened for hepatitis B virus before starting treatment with rituximab
This screen must include HBV surface antigen and anti-HBV core antibody

Drugs/Dosage/ Frequency:

Choice of dose according to clinician preference[1,2,3]:

Rituximab	**375mg/m²**	IV once weekly for 4 consecutive weeks (dose 'banded' according to dosing table below)
or		
Rituximab	**100mg (fixed)**	IV once weekly for 4 consecutive weeks

Premedication:

Paracetamol 1000mg	po	60 minutes before each treatment
Chlorphenamine 10mg	IV	15 minutes before each treatment
Dexamethasone 8mg	IV	15 minutes before each treatment

Main Toxicities: severe cytokine release syndrome – usually occurs within 1–2 hours of the first rituximab infusion (see Comments) and consists of fever, headache, rigors, flushing, nausea, rash, URTI symptoms;
transient hypotension and bronchospasm are usually infusion rate related;
increased risk of infections

Anti- emetics: mildly emetogenic (anti-emetic not routinely needed)

Extravasation: non-vesicant

Administration:

Rituximab 100mg fixed dose: in 100ml sodium chloride 0.9% IV infusion over 2 hours

Rituximab 375mg/m²: dilute in 500ml 0.9% sodium chloride & administer according to the following instructions:

First infusion:
start at 50mg/hr, according to infusion table below, or locally approved method of calculating infusion rates;
escalate in 50mg/hr increments every 30 minutes to a maximum of 400mg/hr.
Monitor patient's vital signs (blood pressure, pulse, temperature and O_2 saturation) at baseline and then every 30 minutes (before each increase in infusion rate) until end of infusion.

Subsequent Infusions:
*** Only patients who tolerated previous infusions at the standard rate ***
Give 20% of dose (i.e. 100ml) over 30 minutes, then the remaining 80% (i.e. 400ml) over 1 hour, to give a total infusion time of 90 minutes.
Monitor patient's vital signs at baseline, then every 30 minutes until end of infusion.

*** Patients who did not tolerate their previous infusion at the standard rate ***
Administer and monitor as per first infusion, or at a slower rate if required.

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	Infusion Rate (mg/hour)							
	50	100	150	200	250	300	350	400
Rituximab 'banded' dose	**Infusion Rate (ml/hour) for rituximab in 500ml volume only**							
450mg	55	111	166	222	277	333	388	444
500mg	50	100	150	200	250	300	350	400
600mg	42	83	125	167	208	250	292	333
700mg	36	71	107	143	178	214	250	286
800mg	31	62	94	125	156	187	219	250
900mg	28	56	83	111	139	167	194	222
1000mg	25	50	75	100	125	150	175	200
1100mg	23	45	68	90	114	136	159	182

Full resuscitation equipment must be available, with immediate access to clinical staff trained in resuscitation for the first hour of the first rituximab infusion.
If reactions occur at any time, stop the infusion. If symptoms improve, restart at half the previous infusion rate, and escalate as tolerated.

Regular Investigations:

FBC baseline (and may be repeated before each dose, but results not required for rituximab prescribing or administering)
LFTs baseline only*
U&Es baseline only*

* consider further repeats prior to each weekly infusion if baseline abnormal or clinical concerns

Comments: Use with caution if WBC > 25 x 10^9/l, as increased risk of severe cytokine release syndrome. Consider giving with a reduced infusion rate and monitor very closely. If in doubt, check with Consultant.

Patient Information: Macmillan leaflet for Rituximab

References:

[1]NICE evidence summary 2014, ESUOM35 (ITP)
[2]NICE evidence summary 2015, ESUOM39 (AIHA)
[3]2016 BCSH guidelines for AIHA

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