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Specialty guides for patient management during the coronavirus pandemic

Clinical guide for the management of rheumatology patients during the coronavirus pandemic

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"…….and there are no more surgeons, urologists, orthopedists, we are only doctors who suddenly become part of a single team to face this tsunami that has overwhelmed us".
Dr Daniele Macchine, Bergamo, Italy, 9 March 2020

As doctors we all have general responsibilities in relation to coronavirus and for these we should seek and act on national and local guidelines. We also have a specific responsibility to ensure that essential rheumatology continues with the minimum burden on the NHS. We must engage with those planning our local response. We may also need to work outside of our specific areas of training and expertise, and the General Medical Council has already indicated its support for this in the exceptional circumstances we may face: www.gmc-uk.org/news/news-archive/how-we-will-continue-to-regulate-in-light-of-novel-coronavirus

Rheumatology may not seem to be in the frontline with coronavirus but we do have a key role to play and this must be planned, as well as having a percentage of patients who will be at increased risk of coronavirus. We should seek the best local solutions to continue the proper management of our patients while protecting resources for the response to coronavirus

In addition, we need to consider that the that the facility for patients will be compromised due to a combination of factors including staff sickness, supply chain shortages and the redeployment of staff.

Specialty patients to consider

- **Obligatory inpatients:** Continue to require admission and management, eg we must expedite treatment to avoid delay and minimise length of stay.
- **At-risk patients.** Patients with reduced immune responses.
- **Escalation matrix.** Overall chart for consideration of services.

When planning your local response, please consider the following:

Obligatory in-patients

- **A consultant must be designated as 'lead consultant'.** This duty can be for one day, a few days or even five days in small units. This is an essential role during crisis management. It cannot be performed by the consultant 'on-call' or the consultant in fracture clinic or the consultant in theatre. They must be free of clinical duties and the role involves co-ordination of the whole service from emergency department (ED) to theatre scheduling and liaison with other specialties and managers.
- It can be very stressful during a crisis. Support each other and share the workload. Do not expect the clinical director to do all the co-ordination!
- **A leadership team should support the lead and include relevant members of the multidisciplinary team (MDT).**
- Establish a daily sitrep and dashboard with critical data to share across the workforce. That should include patient flows, workforce issues, stock levels and other key messages (eg state of coronavirus response, personal protective equipment (PPE) requirements).
- Make contingency plans for supply chain issues.

At-risk patients

The threat to those with reduced immune responses from being infected with coronavirus may require the NHS to do three things:

1. protect vulnerable individuals from the risk of infection
2. reduce the risk of transmission between people attending clinical facilities
3. free up capacity for inpatient and high-dependency care.

The vulnerable population (see Tables 1 and 2) will include rheumatology patients who are receiving conventional disease-modifying drugs (cDMARDs), JAK inhibitors and biologics, but also patients with kyphoscoliosis. Many patients have multisystem disease including heart, lung and/or renal involvement which puts them at an additional risk. Rheumatology patients cover the whole age spectrum but we now have a significant number of patients on these drugs who are 80+, which probably adds a further level of risk when infected with coronavirus.

Action will be required from outpatient clinics to rheumatology day case units (where IV biologics and chemotherapy [IV cyclophosphamide] are administered) to pharmacies, including homecare delivery services.

Some of the very vulnerable rheumatology population can be quickly identified through rheumatology day case units. A complete list of units delivering biologics and chemotherapy should be available to the incident response team and this should include rheumatology day case units. Units will be notified in advance that in the event of escalation, they will be required to draw up and submit a patient list. Other strategies may be required to identify patients, eg patients who fall under specialised commissioning can be identified from the patient-identifiable data submitted to quality dashboards, patients attending DMARD monitoring clinics, patients receiving drugs via homecare services.

All rheumatology services will have a role to play in reducing risk of transmission between people attending services and in freeing up capacity. Table 3 sets out actions to be taken. In the event of a high prevalence of infection, all low, medium and high prevalence actions should be put into place.

As well as the specific actions below, rheumatology services should adopt broader NHS guidance, including providing patients with information on coronavirus.

Table 1: List of at-risk patients

Name of disease	Risk grading: very high (VH), high (H) or increased (I)	Additional comments
Any autoimmune connective tissue disease (CTD) or vasculitis – general comment	H/VH	Mechanical ventilation is especially challenging and many of the patients with severe CTD and vasculitis are poor ITU candidates so service needs to have strong prevention strategy
Systemic lupus erythematosus (SLE)	H/VH	
Systemic sclerosis (SSc)/scleroderma	H/VH	Specific risk of lung, heart, pulmonary hypertension complications that mean undercurrent severe infection much more likely to be fatal in SSc and other SSc-like CTDs
Myositis, polymyositis, dermatomyositis, antisynthetase syndrome	H/VH	If disease active – increased risk due to respiratory muscle weakness as well as co-existing interstitial lung disease which is common in these patients and other overlap CTDs
Primary Sjögren's syndrome	H	
Overlap connective tissue disease (CTD)	H	
Relapsing polychondritis	H/VH	
ANCA-associated vasculitis, granulomatosis with polyangiitis (GPA), Wegener's, eosinophilic granulomatosis with polyangiitis (EGPA)/Churg Strauss syndrome, microscopic polyangiitis (MPA)	H/VH	
Aortitis	H/VH	
Takayasu/Takayasu's arteritis	H/VH	
Giant cell arteritis (GCA)/temporal arteritis	H/VH	
Behcet's disease	H/VH	
Polyarteritis nodosa/PAN	H/VH	

Name of disease	Risk grading: very high (VH), high (H) or increased (I)	Additional comments
IgA vasculitis	H	
Vasculitis (any)	H/VH	
Cryoglobulinaemia	H/VH	
Hypocomplementaemic urticarial vasculitis	H/VH	
Cogan's syndrome	H/VH	
Adult-onset Still's disease	H	
Autoinflammatory syndromes	H	
IgG4-related disease (IgG4 RD)	H/VH	
Rheumatoid arthritis (RA)	H/I	
Psoriatic arthritis (PsA)	H/I	
Ankylosing spondylitis (AS)	H/I	
Juvenile idiopathic arthritis (JIA)	H/I	
Polymyalgia rheumatica (PMR)	I	
Severe osteogenesis (previously types III/IV) imperfecta	H/VH	As a result of potentially restricted mobility and chest wall shape/capacity
Fibrodyplasia ossificans progressive	H/VH	
Severe kyphosis/scoliosis from rare bone diseases, eg hypophosphatasia, Type 1 osteogenesis imperfects (OI), Hadju Cheney	H/VH	
CTD-ILD, RA-ILD, CTD-related ILD, CTD-related interstitial lung disease	H/VH	
CTD-PH, RA-PH, CTD-related pulmonary hypertension, RA-related pulmonary hypertension	H/VH	

Table 2: List of immunsuppressants that could put patients at risk

Immunosuppressant or indicative medications
NB Use of immunosuppressants (conventional or biological) is probably more relevant in defining risk rather than the underlying individual disease. **Many patients are on more than one of these drugs, thus increasing their overall risk.** **All of the drugs listed below would put an individual at an increased risk. The presence of additional risk factors would put them at a high risk or very high risk. These risk factors include: high doses; use of multiple immunosuppressants; active disease; presence of other co-morbidities, such as interstitial lung disease/pulmonary fibrosis, pulmonary hypertension/pulmonary arterial hypertension, glomerulonephritis/renal impairment (any cause), neutropaenia, liver disease, diabetes mellitus, ischaemic heart disease, other underlying lung disease (such as asthma, chronic obstructive pulmonary disease; COPD), pregnancy and older age.** **Some patients with very active disease, eg newly diagnosed and on IV cyclophosphamide may be at very high risk.** **The following examples illustrate this:** • female aged 35, RA, no co-morbidity on methotrexate – increased risk • female aged 35, RA, no co-morbidity on etanercept – high risk • female aged 75, RA, COPD and renal impairment on etanercept – very high risk. **Patients must not suddenly stop prednisolone.** **Patients can continue hydroxychloroquine and sulfasalazine if they are infected with coronavirus.** **If a patient is infected with coronavirus, they should temporarily stop their conventional DMARD and biological therapy. They should contact their rheumatology service for further advice about when to restart treatment.**
Prednisolone up to 10mg and also on other immunosuppressants (I/H), 10–19mg/day monotherapy (I); if in combination with other immunosuppressants (H/VH), 20mg or more per day (H/VH),
Methotrexate (H)
Leflunomide (H)
Azathioprine (H)
Mycophenolate mofetil (H/VH)
Myfortic (H/VH)
Cyclophosphamide IV or oral (H/VH)
Ciclosporin (H)
Tacrolimus (H/VH)
NB the following biologics may or may not be on a primary care record/database as they are prescribed in secondary care but can be searched for on HES if given in a day case unit, eg X92.1 includes rituximab, tocilizumab and infliximab. Subcut drugs, eg adalimumab and etanercept, are supplied by homecare companies. **The receipt of any biologic probably puts the patient in the high or very high category.**

Rituximab (Mabthera, Truxima, Rixathon) especially if given in last 12 months
All anti-TNF drugs: etanercept (eg Enbrel, Elrezi, Benepali), adalimumab (eg Humira, Amgevita), infliximab (eg Remicade, Inflectra), golimumab, certolizumab
Tocilizumab – unable to mount a CRP response, IV or s/c
Abatacept IV or SC
JAK inhibitors (eg baricitinib oral, tofacitinib oral)
Belimumab IV
Anakinra SCc
Secukinumab
Ixekizumab
Apremilast (I)
Sarilumab
Ustekinumab
Other treatments not listed elsewhere with an increased risk
Human stem cell transplant
Apheresis

Table 3: Escalation matrix

	Prevalence of COVID-19 infection and associated available hospital resources			
	Low (equivalent to winter pressures)	Medium (ITU beds start to be in short supply, still reasonable number of hospital beds)	High (no ITU beds, theatre pods being used, very low hospital beds, capacity increased by emergency discharges as per mass casualty plans, elective operating stopped)	Very high (as per high but also reduced capacity for emergency surgery)
All services: outpatient clinics	**New patients:** continue as usual **Follow-up:** reduce long-interval (>3 months) follow-up visits	**New patients:** continue as usual **Follow-up: c**ut non-essential follow-up visits; adjust templates to minimise waiting times; option for telephone or video consultation instead of face-to-face consultation	**New patients:** cut all but urgent clinic attendances; new patients with suspected inflammatory arthritis including autoimmune connective tissue disease and vasculitis should be seen, other new patients to be triaged by consultant to determine if they need to be seen **Follow-up patients:** to be given option of telephone or video consultation unless absolutely necessary to see face to face	**New patients:** cut all but urgent clinic attendances; new patients with suspected inflammatory arthritis including autoimmune connective tissue disease and vasculitis should be seen, other new patients to be triaged by consultant to determine if they need to be seen **Follow-up patients**: to be given option of telephone or video consultation unless absolutely necessary to see face to face
Patients on conventional DMARDs, JAK inhibitors and biologics	Maximise blood tests out of hospital where local resources allow Minimise attendances in clinics Use telephone/video consultations if possible	Home delivery of oral systemic drugs/provide FP10 prescriptions for readily available drugs; possibly issue prescriptions for longer durations, eg 4 months instead of 3 months Schedule appointments to avoid patients waiting for treatments Maximise use of home care administration		

		On case-by-case basis, determine if patient could reduce any of their medication	On case-by-case basis, determine if patient could reduce any of their medication	On case-by-case basis, determine if patient could reduce any of their medication
Day case units	As usual	Screen patients to check if treatment could be deferred, eg patient stable and on regular rituximab infusions	Screen patients to check if treatment could be deferred, eg patient stable and on regular rituximab infusions Denosumab must not be deferred but zoledronate could be deferred up to 6 months	Screen patients to determine benefit versus risk with delay in treatment Denosumab must not be deferred but zoledronate could be deferred up to 6 months
Rheumatology advice lines (consider providing extra cover from home by nurses needing to self-isolate)	Key; prompt response required	Key; prompt response required	Key; prompt response required Management of disease flare: have a lower threshold for issuing acute prescriptions where appropriate, eg colchicine for gout or prednisolone for RA flare, preferably on FP10	Key; prompt response required Management of disease flare: have a lower threshold for issuing acute prescriptions where appropriate, eg colchicine for gout or prednisolone for RA flare, preferably on FP10
On-call service (hospitals where rheumatology out-of-hours on-call service is not available currently, should consider an on-call rota)	Ensure good liaison with acute services and be involved in the management of rheumatology patients admitted with coronavirus In case of consultants needing to self-isolate but otherwise well, they could provide second-on on-call service and give advice on the phone	Ensure good liaison with acute services and be involved in the management of rheumatology patients admitted with coronavirus In case of consultants needing to self-isolate but otherwise well, they could provide second-on on-call service and give advice on the phone	Ensure good liaison with acute services and be involved in the management of rheumatology patients admitted with coronavirus In case of consultants needing to self-isolate but otherwise well, they could provide second-on on-call service and give advice on the phone	Ensure good liaison with acute services and be involved in the management of rheumatology patients admitted with coronavirus In case of consultants needing to self-isolate but otherwise well, they could provide second-on on-call service and give advice on the phone In case of a significant number of consultants off work, consider liaising with nearby hospital on-call service and use virtual regional MDT meeting facility

Other considerations

- We should avoid unproductive attendances at hospital.
- Senior decision-making at the first point of contact should reduce or even prevent the need for further attendances.
- Clinicians may need to work in unfamiliar environments or outside their sub-specialist areas. They will need to be supported.
- The possibility of a seven-day service may need to be considered.
- Using virtual clinic (VC) will not reduce ED workload. Hospitals using this system may need to switch during the crisis to the system outlined above.
- The patient information used in VC will be very effective in reducing follow-up visits.
- Consider postponing long-term follow-up patients until the crisis has passed.
- CT scanning may be limited as it is the investigation of choice for coronavirus pneumonitis.