Factors associated with PCP in the non-HIV immunocompromised population.

Methods Retrospective study of patients admitted to a large teaching hospital, diagnosed with PCP infection February 2018 to January 2023 inclusive. Those with HIV diagnosis were excluded.

Results 84 patients were identified. Median age was 67.5 years [IQR: 60 – 74.3]. Diagnosis was confirmed via bronchoalveolar lavage (BAL) in 62/84 (73.8%), radiology in 17/84 (20.2%), sputum in 2/84 (2.4%) and information unavailable in 3/84 (3.6%).

30/84 (35.7%) required intensive care admission; of these, 7/30 (23.3%) required ventilatory support. Overall mortality was 29/84 (34.5%).

Table 1 summarises the underlying diagnoses and immunosuppressive medications associated with PCP infection. The greatest risk of PCP infection was with co-administration of immunosuppressive and glucocorticoid medication, particularly in haematological malignancy and solid organ transplant. Of these, patients with haematological malignancy received a median equivalent prednisolone dose of 40 mg; patients with solid organ transplant received a median equivalent prednisolone dose of 5 mg. For patients receiving glucocorticoid medication alone, the median equivalent prednisolone dose was 28 mg [IQR: 16 – 30]. In patients with underlying solid tumour, the greatest proportion received chemotherapy only. In patients with immune-mediated inflammatory diseases, methotrexate was the most common immunosuppressant medication associated with PCP infection.

19/55 (34.6%) were commenced on PCP prophylaxis on discharge.

Conclusions PCP infection in the non-HIV immunocompromised carries high mortality. The risk of PCP is greater with co-administration of immunosuppressive and glucocorticoid medication, particularly in haematological malignancy and solid organ transplant. Methotrexate is associated with risk of PCP infection in immune-mediated inflammatory diseases. The majority of non-HIV immunocompromised patients with PCP infection had underlying malignant diagnosis. A third of patients were prescribed prophylaxis on discharge. Greater guidance should be considered to aid specialist decision making regarding primary prevention of PCP infection in non-HIV immunocompromised patients.

Methods A retrospective case-notes review was conducted, examining all admissions with confirmed PCP to all ICUs in Oxford University Hospitals (OUH) between 2011 and 2021. Demographic data; co-morbidities; and the presence of immunosuppression, chemotherapy, organ transplant, small-molecule inhibitor use or retroviral disease was extracted.

Results Twenty-nine patients received treatment for confirmed PCP infection Eight patients (8/29; 27.6%) had received chemotherapy within the last 6 months. Four (4/29; 13.8%) had received a bone marrow transplant in the preceding 12 months, whereas five (5/29; 17.2%) had received a solid organ transplant during their lifetime. Eighteen (18/29; 62.1%) of patients had documented use of immunosuppressive medications within the 6 months preceding admission to ICU. Eight patients were on methotrexate, nine were on high-dose steroid and four were on a monoclonal antibody. Only four patients (4/29; 13.8%) had a diagnosis of HIV, of which three had detectable viral load. Four (4/29; 13.7%) patients were on PCP prophylaxis at the time of hospital admission.

Discussion In a single centre co-located with a bone-marrow and solid-organ transplant service, the majority of patients requiring ICU admission for treatment of PCP had iatrogenic immunocompromise. Most established literature on PCP prevalence and outcome in critical care involves the HIV population. There is an evolving and expanding cohort of patients with PCP related to non-HIV immunosuppression. There is relatively little dedicated study in this cohort regarding PCP outcomes.

REFERENCES

Please refer to page A289 for declarations of interest related to this abstract.

**P86**

**ADVERSE EVENTS AFTER ANTICOAGULATION IN COVID-19 POSITIVE INPATIENTS: A TRIPLE CYCLE AUDIT AGAINST NICE GUIDANCE NG191**

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Aim Several intra-abdominal bleeding events were reported in University Hospital Southampton (UHS) in COVID-19 positive inpatients on anticoagulation, when optimal thromboembolic prophylaxis was unknown, with national and local guidance changing frequently. The aim of this audit was to compare adherence to evolving NICE COVID-19 rapid guideline (NG191) in UHS, investigating adverse events, bleeding or thrombotic, and their adherence to guidelines.

Methods We conducted a retrospective three-cycle audit with data collected from electronic prescriptions of enoxaparin, for COVID-19 positive patients in UHS for: Jan 15th-Feb 13th2021 (Cycle 1 100 patients), Aug 29th-Sep 27th2021 (Cycle 2 122 patients) and Nov 15th-Dec 14th2021 (Cycle 3 87 patients). The 3 components of the audit cycle reflected changing dosing of prophylactic low-molecular weight heparin.

Results Against the NICE NG191 guideline, our audit demonstrated 94% adherence in Cycle 1, with 19 clotting events, 5
associated with patient deaths, and 1 bleeding event. Cycle 2 showed 100% adherence to the guideline, with 10 clotting and 4 bleeding events. Cycle 3 showed 95% adherence to the guideline, with 10 clotting events, 2 associated with patient deaths, and 2 bleeding events. All events in each cycle were adherent to the NICE guideline.

**Conclusion** Overall, guideline adherence was good. No adverse events were associated with non-adherence to guidelines. Clotting events were more common that bleeding events in all cycles, and no adverse deaths were associated with bleeding events. Adverse clotting events were higher in patients requiring higher level of care and with treatment resistance to LMWH. Bleeding events were more common when therapeutic anticoagulation was indicated. This audit provides supportive data for prophylactic anticoagulation in hospitalised patients with COVID-19.

**P87 LUNG OPACITY SCORE OF COVID-19 PATIENTS AND ITS ASSOCIATION WITH CHEST CT SCAN FINDINGS AND FUNCTIONAL CAPACITY 9 TO 18 MONTHS AFTER DISCHARGE**

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**Introduction** In the Philippines, the total COVID-19 cases have reached over 3.6 million. It has become apparent that not all COVID-19 patients have full symptom resolution, and some patients report the emergence of new symptoms over time.

**Objectives** To determine the association of lung opacity score during admission with the chest CT scan findings and functional capacity at 9 to 18 months after discharge of COVID-19 patients.

**Methods** This is an ambispective cohort study. Subjects include those who were discharged from Lung Center of the Philippines from March 2021 to March 2022. Lung Opacity Score was determined using CT Pneumonia Analysis from the chest CT scan on admission. Participants were followed up at 9 to 18 months after discharge and underwent high-resolution chest CT scan and assessment of functional capacity.

**Results** A total of 731 subjects were invited to participate in the study, and 31 agreed. Most of our patients were middle-aged, female, hypertensive and diabetic, with severe COVID-19 infection, and presenting commonly with symptoms of shortness of breath, cough, fatigue, fever, and myalgia. The majority were classified under Grade 2 (n=19, 61%), pertaining to a Lung Opacity Score of 6–15. More than 50% of the patients had the following CT abnormalities: nodule (90%), curvilinear lines (87%), ground-glass opacities (65%), and traction bronchiectasis (58%). Before admission due to COVID, 87% of patients rated their post-COVID-19 Functional Status (PCFS) as grade 0 (no functional limitation). After discharge, 35% of patients rated their functional capacity as having slight or moderate functional limitation. There is no noted significant association between Lung Opacity Score and chest CT scan findings (p-value > 0.05).

**Conclusion** This study revealed that there is no significant association between Lung Opacity Score during admission with the chest CT scan findings and functional capacity 9 to 18 months after discharge of COVID-19 patients. Further studies with a larger sample size may be conducted to perform regression analysis to control for the effects of confounding variables.