Background/Aims
Vaccination against coronavirus is a cornerstone in the fight against the COVID-19 pandemic. Although the safety and efficacy of vaccines was established prior to roll out, long-term data and reports of rare adverse reactions remain inadequate. Literature reviews revealed two cases of PMR-like syndrome, left elbow arthritis and a case of rheumatoid arthritis (RA) flare following COVID-19 vaccination. Additionally, a case of new onset RA and case of reactive arthritis was reported with COVID infection.

Methods
We present four patients with polymyalgia rheumatica (PMR) following COVID-19 vaccination. The clinical details of the four patients are outlined in the table:

| Patient | Demographic data | Type of COVID-19 vaccine | Onset of symptoms after the second dose of COVID-19 vaccination | Clinical symptoms | Clinical signs | Autoimmune profile (RF, CCP, ANA, ANCA and protein electrophoresis) | Full blood count | CRP at the onset of symptoms | Prednisolone dose |
|---------|------------------|--------------------------|---------------------------------------------------------------|-------------------|---------------|-------------------------------------------------|----------------|---------------------|-------------------|
|         | 76-year-old Caucasian male | AstraZeneca | Within 1 week | Inflammatory joint pain mainly in shoulders and hand with two hours morning stiffness - Bilateral knee and ankle swelling. - Significant restriction of self-care activities in daily living (ADL) | Limited shoulder abduction - Tenderness over PIP and MCP without synovitis | Negative | Haemoglobin (Hb) 125 g/l and white blood cells (WBCs) 17 x 10^9/l 96 mg/l | 30 mg per day as there was no response to 15 mg and tapered as per PMR regime |  |
|         | 68-year-old Caucasian male | Pfizer | Within 2 weeks | -Severe shoulder pain and morning stiffness - Hand pain affecting ADL | - Limitation of shoulder movement | Negative | Hb 147 g/l and WBCs 11.5 10^9/l 61 mg/l | 15 mg per day tapered as per PMR regime |  |
|         | 73-year-old African male | AstraZeneca | Within 1 week | -Widespread painful joints affecting the neck, pelvic girdle, and hands - Significant restriction of self-care activities | -Limitation of shoulder movement | Negative | Hb 160 g/l WBCs 14 x 10^9/l 105 mg/l | 40 mg per day by A & E; and tapered as per PMR regime |  |
|         | 65-year-old Caucasian male | AstraZeneca | Within 1 week | -Sudden onset of pain and stiffness of both shoulders and pelvic girdle - Requiring a walking stick - Significant morning stiffness | -Limitation of both shoulder movement | Negative | Hb 124 g/l and WBCs 9.8 x 10^9/l 161 mg/l | 15 mg per day tapered as per PMR regime |  |