Algorithm for investigation of a newly detected paraprotein

Newly found M-protein in serum

- Request full blood count, renal function, calcium, albumin and LDH
- Request serum immunoglobulin levels, and repeat protein electrophoresis
- Send spot urine for detection of BJP

IgG, IgA, IgD or IgE paraprotein

- Assess patient for symptoms and signs of:
- Myeloma – hypercalcaemia, anaemia, bone pain, infection, hyperviscosity
- Lymphoma – lymphadenopathy, hepatosplenomegaly, pancytopenia, symptoms eg night sweats, fever, weight loss
- Amyloidosis – macroglossia, unexplained heart failure, peripheral neuropathy, carpal tunnel syndrome, nephritic syndrome
- Consider performing X-rays of symptomatic areas

IgM paraprotein

- Assess patient for symptoms and signs of:
- Lymphoma – lymphadenopathy, hepatosplenomegaly, pancytopenia, symptoms eg night sweats, fever, weight loss
- Perpheral neuropathy
- Myeloma – although unusual

- IgG PP < 15g/l
- IgA PP < 10g/l
- IgM PP < 10 g/l
- Uninvolved immunoglobulins normal
- Asymptomatic
- No other abnormal results

Follow up by non-haematologist:

- Likely monoclonal gammopathy of undetermined significance (MGUS)
- Repeat serum or urine electrophoresis every 3 months and extend interval to 6 months if stable and no symptoms
- Actuarial life expectancy likely < 5years: no planned screening tests but occasional blood tests may be performed if other blood tests are being done

New symptoms/signs:

- Such as new bone pain, weight loss, fatigue
- M-protein rises by >25% (minimum absolute rise of 5 g/l)
- Unexplained anaemia, other cytopenias, renal impairment, hypercalcaemia

- Symptomatic of suspected treatable disorder
- Abnormal physical signs suggestive of underlying plasma cell or lymphoproliferative disorder
- Unexplained abnormal investigation results (blood or X-ray)
- IgG PP > 15g/l
- IgA PP > 10g/l
- IgM PP > 10 g/l
- Any IgD or IgE paraprotein irrespective of size

REFER TO HAEMATOLOGIST FOR INVESTIGATION AND MANAGEMENT

Adapted from UK Myeloma forum (UKMF) and Nordic Myeloma Study Group guidelines for the investigation of newly detected M proteins and the management of monoclonal gammopathy of undetermined significance, British Journal of Haematology, 147, 22-42