HEALTHCARE OF THE ELDERLY.

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Elective Report

How does elderly medicine compare to general medicine? Will an ageing world affect this?

With an increasingly ageing world, the need for a specialised healthcare department geared towards the elderly is becoming ever more vital. Just as children have their own specialists, otherwise known as paediatricians, care of the elderly consultants are becoming more and more sought after with ever changing demographics. Whilst the specific conditions and diseases between those deemed 'elderly' are not too different from the rest of the population, it is the presentation of these diseases which can differ and therefore requires a group of specialists to focus on such a population.

The cut off between those deemed elderly is around 70 years of age, however this can differ from hospital to hospital. The types of diseases seen, as mentioned above, are similar to any middle aged human, however those elderly are prone to presenting with what are known as the 'Geriatric Giants'. These include, incontinence, instability, immobility, and impaired intellect as well as memory. For these reasons, care of the elderly specialists should be aware of how these symptoms relate to underlying pathology. Along with these presentations, another reason for the difference in those elderly than general medicine is the multiple pathology that they present with, with co-morbidity extremely likely and therefore more complex diagnosis and treatment plans required. Associated with these two aforementioned points is the fact that elderly medicine includes heavy input from other members of the multi discipliniary team, such as social workers, occupational therapists, speech and language therapists, and physiotherapists amongst others. Therefore it is important to take a holistic approach when taking care of those elderly patients.

With an ageing population, I feel this will put more emphasis on junior doctors becoming exposed to elderly medicine as well as more emphasis placed on medical students to learn the presentations and management of common conditions within this population.

How does South London health differ to North East London? Does the prevelance of disease differ?

There is an obvious difference in the cultural backgrounds of those living South of the River Thames compared to those in the North East. Whilst in the North East, it is predominantely the South East Asian population which dominate, the South of London is mainly dominated by those of White background. For this reason, the prevelance of diseases does differ. Whilst in the North East, conditions such as diabetes and Tuberculosis are more common, this is fairly different to those in South London, where conditions such as COPD and Pneumonia are more prevalent. The reasons for this cannot be stated off hand without research studies being carried out, however in brief, once would assume that the prevalance of TB is known throughout East London due to the influx of people from endemic areas in Asia, whereas within the White population of South London this is not the case.

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Describe the five commonest diseases along with their pathophysiology, signs and symptoms, diagnosis, investigations and management.

Many different conditions were seen amonst inpatients on the care of the elderly ward. Such conditions did not always have typical presentations, due to the widely known phenomena of the Geriatric Giants. The main diseases that I found were prevalent during my time on the care of the elderly ward were Chronic Obstructive Pulmonary Disease, Asthma, Pneumonia, Fibrotic Lung Disease, and Bronchial Carcinoma.

COPD is seen as part of the spectrum of obstructive airway diseases. The commonst cause of COPD is tobacco smoking, which contributes to the majority of COPD cases. The main symptoms of this disease include coughing and sputum production, as well as wheeze and shortness of breath. Signs include tachypnoea, poor chest expansion and using accessory muscles to breathe. Certain tests can be carried out, initially as with all diseases taking a thorough history is vitally important. Examination of COPD will look for dyspnoea, tar stains on one's nails, and in particular polyphonic expiratory wheeze on auscultation. Further observations are necessary to ilicit any acute needs, in particular the oxygen saturations, as some of those with COPD may be more stable on saturations of 88 to 92%. Thereafter the full blood count is useful in showing any signs of anaemia or raised white cell count for an infective exacerbation. An Arterial Blood Gas is also useful in assessing the pH, oxygen and carbon dioxide levels, in case of a possible respiratory failure. Spirometry can help in assessing the obstrutive pattern of the disease, along with a Peak Expiratory Flow Rate. A Packed Cell Volume is another useful investigation to test for possible secondary polycythaemia, and an ECG can assess right atrial and ventricular hypertrophy due to pulmonary hypertension. Finally, a chest x-ray is useful particularly in acute excacerbations for possible areas of consolidation. Management of COPD involves educating the patient on their condition, and using a multi-discipliniary approach such as physiotherapists in particular. Patients should be advised to stop smoking, to exercise, and vaccinations such as influenza and pneuomococcal should also be considered. The British Thoracic Society has steps in the medical treatment of COPD, these include initially using a Short Acting Bronchodilator Agnosit (SABA) such as salbutamol, or a Short Acting Muscurinic Agonist (SAMA) such as ipatropium. The next steps are to move to a Long Acting Muscurinic Agonist, again in the form of ipatropium bromide, or a Long Acting Muscurinic Agonist (salmetarol) and an Inhaled Corticosteroid (fluticasone). In severe cases a combination of ipatropium, salmetarol and fluticasone can be used, and in those with a pH less than 7.3 Long Term Oxygen Therapy is advised.

Asthma is also prevalent amongst the elderly. It has a similar disease pattern to COPD in that it also causes obstructive airway problems. The causes of Asthma are usually associated with a trigger, such as house dust, cats, or cold weather, amongst others. Those with asthma also have an association in developing eczema, and Asthma is actually common in all ages. Investigations include a thorough history and examination, looking in particular for expiratory polyphonic wheezes. Further investigations include spirometry and peak expiratory flow rate, once again looking for an obstructive pattern under 70%. Management also includes a conservative

approach in avoiding precipitating factors. There is also a stepwise approach in managing asthma; initially an inhaled short acting B2 agonist is advised, such as salbutamol. The next step involved adding an inhaled steroid such as beclamethasone or fluticasone. Step 3 advises a long acting B2 agonist such as salmetarol, with step 4 adding in other drugs such as theophyllines, monteleukast (leukotriene receptor antagonist) or an oral B2 agonist. The final step includes oral prednisolone.

Pneuomnia is extremely common amongst the care of the elderly patients. In particular they can present unorthodoxly, with symptoms such as confusion and lethargy common. The pathophysiology is an underlying infection within the lung tissue. This usually causes symptoms of a fever, rigors, nausea, cough productive of purulent sputum and dyspnoea. The signs can include cyanosis, confusion, and on examination; reduced chest expansion, dull percussion note, bronchial breathing, increasing vocal resonance and fine crackles on auscultation. The investigation of pneumonia includes checking observations especially to rule out signs of a sinister septic shock. Similarly, a septic screen can be carried out if sepsis is suspected, by dipping a urine sample, carrying out a chest x-ray for signs of consolidation, swabbing any areas of the skin, taking a sputum sample for microscopy and culture, and also taking blood cultures to identify the specific organism. A CURB65 score can be carried out to measure severity especially in the elderly, looking at C (Confusion – mental score <8), U (Urea >7mmol/L), R (Respiratory rate >30/min), B (Blood Pressure <90 systolic), and 65 (over the age of 65). The management of pneumonia depends very much on the type of organism found after taking blood cultures or sputum samples, as there can be community acquired or hospital acquired organisms, as well as typical and atypical and opportunistic amongst others. Types of antibiotics include Penicillins, Cephalosporins, Tetracyclines, Amingoglycosides and Macrolides (useful in Penicillin resistant patients).

Fibrosing Lung Disease is also common amongst the elderly. In contrast to COPD and Asthma, this condition shows a restrictive pattern of disease. The cause can be idiopathic or extrinsic, the latter being caused mainly by working conditions such as farming, asbestosis and coal mining. Idiopathic fibrosing alveolitis can have underlying conditions associated with its onset, such as rheumatoid arthritis, sarcoidosis, SLE, connective tissue disorders, Ulcerative colitis, renal and thyroid disease. The main symptoms include a dry cough and shortness of breath. Signs on examination include cyanosis, clubbing of the fingers, and quite commonly fine end-inspiratory crepitations. Tests for this condition include spirometry, showing a restrictive pattern (under 70%). Other tests include a CRP which would be high, and an antibody screen for any associated connective tissue disorders. An x-ray may show bilateral lower zone reticulo-nodular shadows or honeycombing, and a CT scan can be considered to show a ground glass appearance. The management of Fibrosing Alveolitis include educating the patient and avoiding any allergens, with medications used include prednisolone and cyclophosphamide.

Bronchial Carcinoma was also seen whilst on the ward, and alike COPD is also strongly associated with smoking. Examination would normally show possible tar staining of the fingers, a cachectic appearance, and dullness to percussion over the affected area. This would usually be

investigated with sputum cytology (showing atypical cells) and x-ray, which would show the affected lesion. A CT scan would be important particularly for any metastasis, and bronchoscopy and biopsy would be routinely done to investigate the lesion further. Management would include a multi-discipliniary approach, particularly in the elderly where such diagnoses may have an impact on their psychological well being. They would normally be advised to stop smoking, and this would be intertwined with radiotherapy + chemotherapy (for non-small cell) and chemotherapy alone (for small call carcinomas), the latter being associated with paraneoplastic syndromes. Eventually, depending on the size and progression of the tumour, a resection can be opted for.

How have I developed as a student and what can I still improve upon?

I feel that I have increased in knowledge and confidence as a student, and in particular in my final year by being exposed to clinical settings even more. My examination technique has markedly improved along with practical skills including venepuncture, cannulation and Arterial Blood Gas. Similarly, I feel my confidence in communicating with patients as well as members of the MDT has grown. However with this said, I can still improve in all areas, which I feel could come with practice and reflection, and learning from those around me. Prescribing is an area I should place more emphasis on and learn from seniors, as well as pharmacists, but also perform self-study. I should know my limitations and not be over-confident, and seek advice where needed. My experiences have been extremely enjoyable and I hope for this to continue into the future.