Malignant Pleural Effusion (MPE) case study with Renate Jolly

Voiceover
0:00:07 - 0:00:12
Rapid Listening: evidence-based cancer learning on the go. Presented by eviQ Education.

Renate Jolly
0:00:20 - 0:01:42
Hello my name is Renate Jolly. I'm the clinical nurse consultant in Respiratory Medicine at Royal Perth Hospital, and I've recently completed my Masters of Nurse Practitioner in this field also. I work in the pleural clinic with respiratory consultants, and we regularly see patients with metastatic pleural effusions. The case that I'm presenting today is a Mr P who was an eighty year old gentleman, was recently presented to his GP for a fitness to drive assessment, but was found to be significantly short of breath and was referred to Royal Perth. Mr P's symptoms were weight loss, shortness of breath particularly on exertion which had been increasing over the last week in severity, increased respiratory effort and respiratory rate, although he did not complain of any cough or infective symptoms. His baseline observations were within normal limits other than his respiratory rate and his oxygen saturation was that of 95%. On examination, there was a dull percussion in the right middle lobe and right lower lobe, and there was also reduced air entry into the same zones. His infective markers such as white cell count and CRP were not increased, and he had past medical history of pneumonia, AF, COPD, gout and was an ex-smoker. Of note, his occupational history: he served in the defence forces as a naval engineer, and he'd worked in the engine room applying slag to various equipment and boilers. A chest X-ray and bedside ultrasound also demonstrated that he had a right side pleural effusion, and this was of quite significant size and volume.

Renate Jolly
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After discussion with pleural consultant it was decided that a pleural centesis was what was required. A pleural thoracentesis or a large volume aspirate can have dual benefits. Many patients will find resolution or relief of their symptoms once the effusion has been drained and the fluid is sent for testing. The routine tests are generally MCNS, pH, LDH, protein, glucose, cell count differential and cytology, which will give us an indication of the cause of the effusion. We drained 1.5 of

haemoserous fluid. The pleural fluid demonstrated that it was not infective in nature as there was no growth, PH was normal, and the effusion was not transudative in nature. The pleural sample indicated the patient had malignant mesothelioma. A chest CT was done post-drainage and this showed thickening of the pleural lining.If a pleural effusion re-accumulates there are generally two pathways that we consider: talc pleurodesis or indwelling pleural catheter. Both have pros and cons. The talc pleurodesis will allow the two plural linings to adhere and then, with the intention of the prevention of further pleural effusions. Unfortunately, talc is not always effective, making the insertion of an IPC more difficult later. We also need pleural apposition for it to be the most effective. But the benefits are that there's no external devices, no ongoing dressings, care or drainage. Alternatively, the insertion of an indwelling pleural catheter, or IPC, the patient must have relief of their symptoms through the initial drainage. There's also flexibility of drainage. They can remain at home and thereby improving their quality of life. We minimise their hospitalisations and the patient does not need to undergo multiple procedures and their inherent risks.

Renate Jolly
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Unfortunately, not everyone likes an IPC - they can be aesthetically unacceptable. Patients need to be compos mentis, and they require education. And there's also an infection risk because it's an invasive device. There's also the cost of consumables, which, if patients wish to do it themselves is a factor. Mr P decided he would prefer to try a talc pleurodesis. Unfortunately for him, this was unsuccessful and he re-accumulated his pleural effusion and an IPC was required. The IPC actually required twice weekly drainages, and these were able to manage his symptoms and keep him comfortable. The other specialty needs that we required were dietetics, palliative care, medical oncology and Silver Chain. Dieticians can help with food supplements to meet nutritional needs, the maintenance of their, and minimisation of their weight loss and the optimisation of their general condition. Chemotherapy can be offered to certain patients and this is generally discussed with the medical oncologist and sometimes there will be trials that can be offered to them. Silver Chain is useful for IPC management and support. Home Hospice through palliative care is useful when the patient enters into their terminal phase.

Renate Jolly
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Other considerations for asbestos related disease in particular mesothelioma is compensation factor. This should be discussed with the patients. As mentioned,

	Mr P spent time in the defence forces and has had extensive exposure to asbestos and he would be entitled to some form of compensation. There are many asbestos related support centres around the country. For example, in Western Australia there is The Aspestos Disease Society of Australia. This patient decided that being independent was very very important to him and to allow him to be further drained at home and manage his symptoms was very important. With the IPC he was able to have short holidays and spent some time together with his partner even in the event of COVID. I hope this presentation helped you understand the process, diagnosis, management of a patient with a malignant pleural effusion and I thank you for your time.
Voiceover 0:05:44 - 0:05:49	This is a production ofthe Cancer Institute New South Wales, a pillar organisation of New South Wales Health. For information, visit cancer.nsw.gov.au.