College of Respiratory Nurses NZNO

Hongihongi te rangi hou'
'Smell the fresh air'

Newsletter of the College of Respiratory Nurses (NZNO)

December 2019

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Note from the Chairperson

Kai ora Koutou Katoa

The winter months are behind us and again it has been a very challenging for the population and on the health professionals working in the hospitals and in Primary health. The measles outbreak has also placed extra pressure on the health system.

The committee has had the opportunity to put forward submissions on several consultation documents including the “End of Life Choice” bill, Health and Disability review to name a few. It is a great opportunity to have the Colleges voice heard. Everyone should take the opportunity to have their say in these important papers. The majority of which will affect us at some time in our lives.

Planning for the Biannual Respiratory Symposium 2020 are well underway and is looking very though provoking. The College has joined forces with the Bronchiectasis Foundation to promote how Bronchiectasis is impacting on our population, especially our Tamariki. So put this date in your calendars and we will look forward to seeing you at the Symposium on April 17th 2020 In Whangarei. Respirations are now open at: https://www.eiseverywhere.com/ereg/index.php?eventid=484407&. Registrations are also now open for SERIF 2020. Once again looking very exciting. There are scholarships available to attend.

Membership to the College is growing steadily and while we are still a small College, we are able to provide a voice for those working with respiratory disease at a national level. We do encourage you and your colleagues to join. Remember, nurses can now belong to three colleges/sections.

The committee of the College of Respiratory Nurses are all looking forward to a relaxing break over Christmas after a very busy year. Again, I thank our incredible committee members for their continued support and dedication throughout the year. Without their hard work and support the College would not be able to function. I would also like to thank all those nurses working with respiratory disease, for their continued dedication to helping people manage their respiratory conditions. The College welcomes all comments, suggestions and information relevant to Respiratory conditions. We also welcome your experiences and insights on managing Respiratory conditions. Our website has all the Committee members’ addresses and useful links to up to date research.

I look forward to communicating with you in the New Year in the first edition of Airways. The Committee members and I wish you and your families a happy and safe holiday season.

Hongihongi te tangi hou
“smell the fresh air”

Marilyn Dyer
Chairperson
College of Respiratory Nurses

Editors Report

Welcome to the December edition of Airways, our last for 2019. This edition of Airways is taking an introductory look at Interstitial Lung Disease (ILD). I was recently asked to speak to a support group on this topic. This came out of a member who had a new diagnosis of interstitial lung disease (ILD) and had found very little self-help information available. It would be great to hear your experiences on this complex topic. So, here is a brief introduction to ILD. Carol George NP

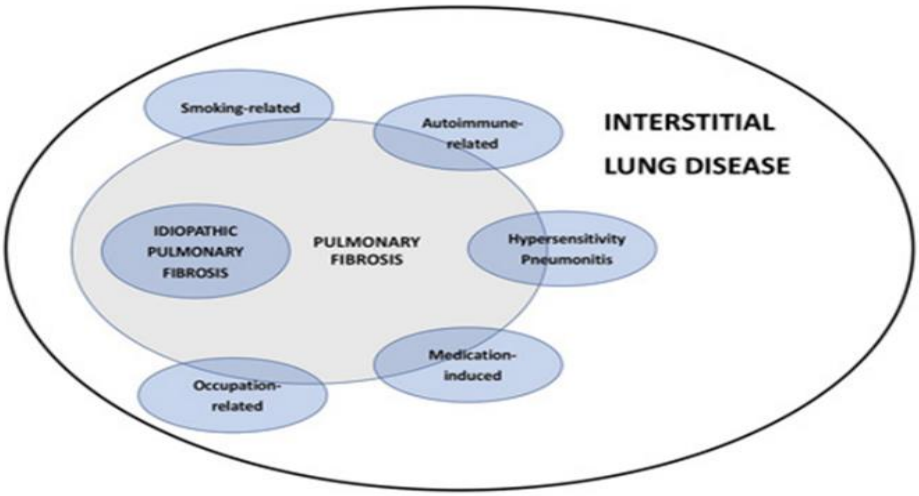
"Elves and nurses do have something in common. We do all the work and one guy in an over-sized coat gets all the credit."

Nursebuff.com

Introduction to Interstitial Lung Disease (ILD)

Interstitial lung disease (ILD) is an umbrella term for a large group of disorders that cause scarring (fibrosis) of the lungs (American Lung Foundation, 2019). Parenchymal scarring results in stiffness in the lungs, making it difficult to breathe. This report will present a brief outline of prevalence and aetiology as well as pharmacological and non-pharmacological aspects of ILD.

The heterogenous character of ILD makes it difficult to demonstrate incidence and prevalence, largely due to the varying classifications and methodologies within ILD. Conservative estimates for ILD in Europe and North America have been reported as 3-9 cases per 1000,000 per year (Hutchinson, Fogarty, Hubbad and McKeever 2015). Whereas, in New Zealand (NZ), a prevalence of 6.53 per 100,000 for the subgroup, Idiopathic Pulmonary Fibrosis (IPF), has been estimated in the Canterbury area (Fulforth, Thomson, Maxwell, Wiseman and Edwards, 2019). As ILD is better understood, incidence and prevalence data will be more clearly defined.



Used with permission Pritt B. located RT for Decision Makers in Respiratory Care

The aetiology of ILD is varied. However, recognized causative factors of ILD include pollution as well as medication and radiation exposure (Mari, Jones and Ricahldi 2019). Medications considered pulmonotoxic include nitrofuintoin, amiodorone and methotrexate. Therefore, minimising exposure to known triggers is an important aspect of reducing the burden of ILD. In addition, connective tissue and autoimmune disorders such as rheumatoid arthritis, sarcoidosis are commonly associated with ILF in particular IPF (Mari, Jones, Richeldi, 2019).

ILD has historically been managed on clinical presentation. As such, four clinical phenotypes have been described; younger white obese females; younger African American females with elevated ANA; elderly white male smokers with emphysema and elderly white male smokers with CT honeycombing (Adegunsoye, Oldham, Chung, Montner, Lee, Witt, Stahlbaum, Bermea , Chen, Hsu, Husain, Noth, Vij, Strek and, Churpek, 2018). Moving forward, a personalised approach is being added to treat and manage ILD (Mari, Jones and Richaldi, 2019).

Pharmacological management of ILD has primarily involved steroid treatment, such as prednisone. More recently, antifibrotics have been available for treatment for subgroups of ILD (Karampitsakos, Vraka, Bouros, Liosis and Tzouvelekis. 2019). In NZ, pirfenidone and ninetedanib have been available under special authority from 2017 and 2018 respectively (Fulfort et. Al., 2019). For which safety profiles have been reported (Mari, Jones and Ricahldi 2019). Moreover, biological, monoclonal antibodies are emerging as a treatment option, with a positive impact in sarcoidosis (Karampitsakos et. al. 2019). However, for ILD efficacy and safety of biological agents have been considered disappointing, where the recommendation is to ensure monitoring and a multidisciplinary approach to patient care (Karampitsakos et. Al. 2019).

Non -pharmacological approaches are important adjuncts in the care of ILD. Therapies such as symptom management, pulmonary rehabilitation, oxygen therapy and palliative care are considered to optimize care (Lindell, 2018). Pulmonary rehabilitation remains an evidence-based option, where improvements in functional exercise capacity, breathlessness and quality of life are have been demonstrated (Dowman, Hill and Holland, 2014). Furthermore, addressing co-morbidities contributing to the burden of disease, include rheumatoid arthritis and pulmonary hypertension is essential. (Mari, Jones, Richeldi, 2019). The management of ILD is an area that has progressed markedly over the last ten years. As nurses we remain well placed, now and in the future, to support care of people with ILD, contributing our expertise and holistic approach to patient care.

Carol George NP

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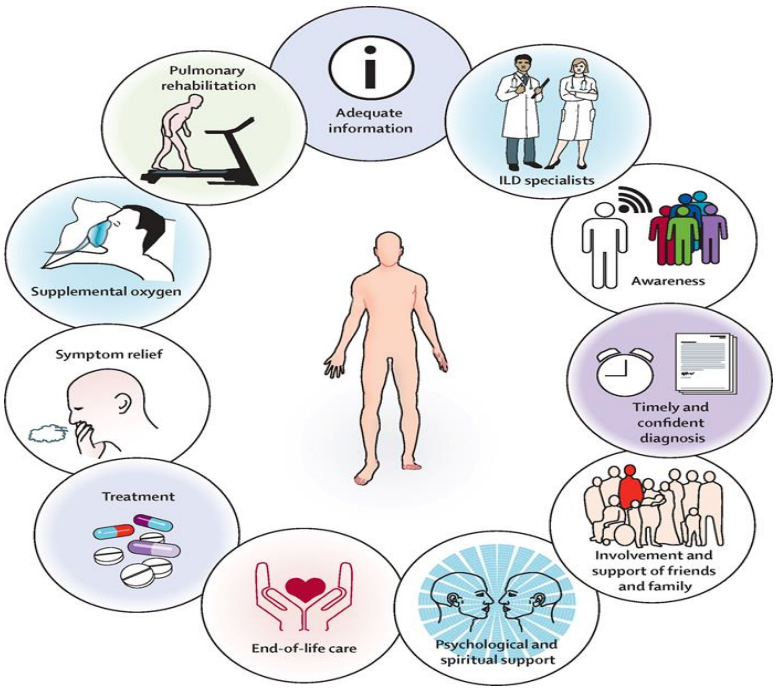
Palliative Care in Interstitial Lung Disease.

As with other Long-Term Conditions, the progressive nature of ILD requires a palliative approach be integral to management of ILD. Structured palliative care is a major aspect of care for people with Interstitial Lung Disease (ILD) and has been described as under recognized and essential for ILD (Fulforth, Thomson, Maxwell, Wiseman and Edwards, 2019). The literature discusses the value of palliative care for people with ILD as - to improve quality of life: be holistic, dynamic, culturally appropriate and caregiver inclusive (Kreuter, M., Bendstrup, E., Russell, A., Bajwah,S., Lindell, K., Adir, Y., Brown, C., Calligaro, G., Cassidy, N., Corte, T., Geissler, K., Hassan, A., Johannson, K., Kairalla, R., Kolb, M. et al (2017). Furthermore, a palliative approach in patient care, can be facilitated using Advanced Care Planning. In conclusion, the palliative needs of people with ILD can be summarised below as by Kreuter et al. 2017).

Carol George NP

Needs of Patients with Interstitial Lung Disease



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Restrictive Lung Disease and Spirometry

Spirometry can be useful for determining the presence of restrictive lung disease but cannot differentiate the cause. Restrictive lung disease occurs when the lung's ability to expand is compromised.

When interpreting spirometry, restriction is identified by a reduction in lung volume showing in the Forced Vital Capacity, FVC. If this is less than 80% of predicted it indicates a restrictive lung pattern.

Restriction can be divided into **pulmonary** and **non-pulmonary** causes.

a) **Pulmonary**: Interstitial lung disease; pneumoconiosis; pulmonary oedema; parenchymal lung tumours; lobectomy/pneumonectomy.
b) **Non-pulmonary**: neuromuscular disorders; postural problems (e.g. thoracic cage deformity or kyphoscoliosis); obesity; pregnancy.

Severity of restriction:

a) 65 – 80 % of predicted = Mild
b) 50 – 65 % of predicted = Moderate
c) < 50 % of predicted = Severe

The cause cannot be determined from spirometry. If it is detected it is recommended to refer to a respiratory laboratory for further testing. Tests include diffusion capacity (DLCO) and full lung volumes.

Interstitial Lung Disease

Interstitial lung disease (ILD) describes a large group of disorders, most of which cause progressive scarring of lung tissue. They include connective tissue diseases. Pulmonary fibrosis can develop and become a key driver of irreversible harm and early mortality; and calls for urgent identification and intervention.

The scarring associated with interstitial lung disease eventually affects the ability to expand the lungs and compromises respiration.

ILD examples include:

- Idiopathic nonspecific interstitial pneumonia
- Unclassifiable idiopathic interstitial pneumonia
- Systemic Sclerosis-ILD
- Rheumatoid Arthritis-ILD
- Hypersensitivity pneumonitis
- Sarcoidosis-associated ILD
- Sjögren's syndrome
- Systemic lupus erythematosus
- Polymyositis and dermatomyositis ILD

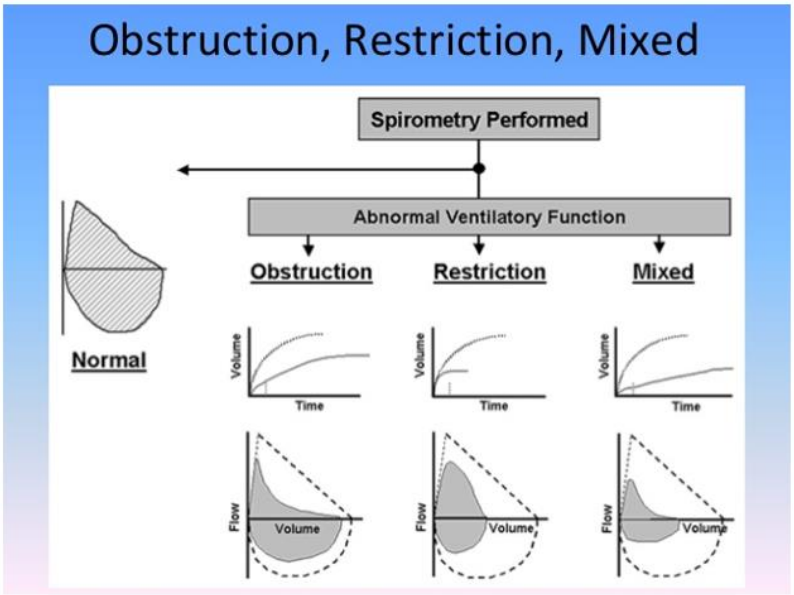
While ILDs, including CTDs differ, common pathogenetic pathways to fibrogenesis are shared:

1. Development of ILD-associated pulmonary fibrosis is thought to be mediated through the migration and proliferation of fibroblasts and their differentiation into myofibroblasts.
2. As fibroblasts and myofibroblasts invade the pulmonary tissue, they continually synthesise and release collagen and extracellular matrix protein.
3. Excessive extracellular matrix protein remodelling leads to irreversible distortion of lung architecture, compromising pulmonary capacity, function, and gas exchange

ILD can be caused by long-term exposure to hazardous materials, such as asbestos. Some types of autoimmune diseases, such as rheumatoid arthritis, also can cause interstitial lung disease. In some cases, however, the causes remain unknown.
Once lung scarring occurs, it's generally irreversible. Medications may slow the damage of interstitial lung disease, but many people never regain full use of their lungs. Lung transplant is an option for some people who have interstitial lung disease. Pulmonary Rehabilitation programs can be useful to help people manage their breathlessness.

Barbara Scott | Respiratory Facilitator

Spirometry Patterns: Obstructive, Restrictive, Mixed.



Resources

- www.lungfoundation.com.au
- www.lungusa.org
- www.nhlbi.nih.gov
- www.mayoclinic.com/health/interstitial-lung-disease
- www.bpold.co.uk
- www.pulmonaryfibrosis.org

Respiratory Symposium 2020, Whangarei

Save The Date - April 17th, 2020

Scholarship for Symposium fees may be available at https://www.nzno.org.nz/groups/colleges_sections/colleges/college_of_respiratory_nurses/scholarships_and_grants
To Register online for Symposium: https://www.eiseverywhere.com/ereg/index.php?eventid=484407&
For further information please contact Mary Cox 0212969452, Marilyn Dyer 021 711567, Camron Muriwai 021593501.

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SIREF Theme DIY Respiratory – Self-Management 27/28 February 2020 - Christchurch

Details – teresa@canbreathe.org.nz

Meet Your Committee

College of Respiratory Nurses Committee, April 2019

Standing L-R: Moira Haycock, Jill West, Marilyn Dyer (Chairperson), Nicola Corna, Vineeta Prasad
Sitting L-R: Carol George, Annie Bradley-Ingle, Mary Cox, Dawn Acker

Contact us

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