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| **Preliminary data of the Third PLeural Effusion And Symptom Evaluation (PLEASE-3) Study: Bendopnoea in patients with pleural effusion** |
| **Bianca M Iacopetta1,2**, Bapti Roy2,3, Carolyn McIntyre1,2, Matthew Ing4,5, Michaela Donaghy4, Y C Gary Lee1,4,5 |
| *1Pleural Medicine Unit, Institute for Respiratory Health, Western Australia, Australia.**2School of Medical and Health Sciences, Edith Cowan University, Western Australia, Australia.**3Respiratory Medicine, Westmead Hospital, New South Wales, Australia.* *4Respiratory Medicine, Sir Charles Gairdner Hospital, Western Australia, Australia.**5School of Medicine, University of Western Australia, Western Australia, Australia.* |
| **Introduction/Aim:** Pleural effusion (PE) affects 90,000 Australians per year. PLEASE-3 examines the prevalence and usefulness of a novel phenomenon, bendopnoea (breathlessness bending forward), which is often reported anecdotally by patients with PE. **Methods:** PLEASE-3 is a prospective study aiming to recruit 200 participants with PE. Eligible patients are assessed at baseline and those undergoing pleural drainage, within 10 days post-drainage. Bendopnoea is assessed as: i) yes/no self-report, ii) timed provocation test (patients instructed to bend for up to 60 seconds). Functional capacity (6-minute walk test; 6MWT) and breathlessness (Visual Analog Scale; VAS), and effusions size (using Lights Grading Scale on chest x-ray) were also assessed.**Results:** This interim analysis includes 88 patients (60% male; median age 71; BMI 26.3 [IQR 23.2-30.5]); 36 had pleural fluid drained (median 1.3L [IQR 0.9- 2.9]). At baseline, 73% of participants reported bendopnoea and 53% developed bendopnoea within one minute on the timed provocation test. Compared to those with small effusions, those with large effusions were more likely to report bendopnoea (80% vs 20%) and provoked symptoms earlier (median 28 seconds [IQR 10-60] vs median 60 seconds [IQR 22-60]). Participants with bendopnoea (n=38) walked shorter distances (median 200m [IQR 120-353]), compared to participants without bendopnoea (n=22) who walked longer distances (median 320m [IQR 245-387]), (p<0.05). 61% of participants increased their bendopnoea tolerance time post pleural fluid was drained (median 16 seconds [IQR 0-43]). Following drainage, participants with bendopnoea had greater improvement in breathlessness (median -15 [IQR -55--2]) compared to participants without bendopnoea (median -6 [IQR -27-3]; p=0.146). **Conclusion:** This is the first study evaluating bendopnoea in PE. Bendopnoea is common in PE, more profound in patients with larger effusions and associated with poorer functional capacity. Patients with bendopnoea have greater improvement in breathlessness following drainage.These results need to be verified with a larger population and multivariate analyses. **Grant Support:** Sir Charles Gairdner Research Advisory Council research project grant. |