

## ABSTRAK

**Latar belakang:** Penyakit membran hialin atau sering disebut *respiratory distress syndrome* (RDS) merupakan salah satu penyebab utama morbiditas dan mortalitas pada bayi prematur. Pemeriksaan X-foto thoraks dapat secara signifikan menunjukkan hasil diagnosis penyakit membran hialin dibanding dengan penyakit distres pernapasan yang lain. Bayi prematur dengan berat lahir kurang dari 1500 gram menjadi faktor risiko terjadinya penyakit membran hialin.

**Tujuan:** Penelitian ini bertujuan untuk mengetahui hubungan antara faktor risiko terhadap derajat keparahan penyakit membran hialin berdasarkan modalitas X-foto thoraks.

**Metode:** Penelitian ini menggunakan desain penelitian observasional analitik dengan metode *cross sectional* dan pendekatan retrospektif. Penelitian dilakukan di RSUP Dr. Kariadi Semarang. Uji statistik meliputi uji korelasi koefisien kontingensi dan uji reliabilitas instrumen menggunakan *Intraclass Correlation Coefficient* (ICC). Penelitian ini menggunakan 30 sampel bayi prematur yang terdiagnosis penyakit membran hialin.

**Hasil:** Hasil penelitian menunjukkan insidensi terbanyak yaitu penyakit membran hialin derajat 1 dan 2 (70%). Sampel terbanyak dengan berat lahir  $\leq 1500$  gram (56,7%), usia gestasi  $\geq 30$  minggu (66,7%), dan tanpa riwayat hipertensi ibu (56,7%). Berdasarkan uji yang telah dilakukan, terdapat hubungan bermakna antara BBL terhadap derajat HMD ( $p = 0,020$ ;  $r = 0,392$ ); usia kelahiran terhadap derajat HMD ( $p = 0,011$ ;  $r = 0,420$ ); riwayat hipertensi terhadap derajat HMD ( $p = 0,013$ ;  $r = 0,414$ ). Sedangkan untuk faktor perancu preeklampsia, metode persalinan dan jenis kelamin didapatkan tidak berhubungan bermakna terhadap derajat HMD ( $p > 0,05$ ) dalam penelitian ini.

**Kesimpulan:** Terdapat hubungan yang bermakna antara berat lahir bayi, usia kelahiran bayi, dan riwayat hipertensi ibu dengan derajat keparahan penyakit membran hialin. Sedangkan riwayat preeklampsia ibu, metode persalinan, dan jenis kelamin tidak berhubungan bermakna dengan derajat keparahan penyakit membran hialin.

**Kata Kunci:** *Faktor Risiko, Penyakit Membran Hialin, X-Foto Thoraks, Bayi Prematur*

## ***ABSTRACT***

**Background:** Hyaline membrane disease or often called respiratory distress syndrome (RDS) is one of the leading causes of morbidity and mortality in premature infants. Chest X-ray examination can significantly improve the diagnosis of hyaline membrane disease compared to other respiratory distress diseases. Preterm infants with a birth weight of less than 1500 grams are a risk factor for hyaline membrane disease.

**Objective:** This study aims to determine the relationship between risk factors and the severity of hyaline membrane disease based on chest X-ray modality.

**Methods:** This study used an analytic observational research design with a cross sectional method and a retrospective approach. The research was conducted at Dr. Kariadi Hospital, Semarang. Statistical tests included the *Contingency Coefficient Correlation Test* and instrument reliability test using the *Intraclass Correlation Coefficient (ICC)*. This study used 30 samples of preterm infants diagnosed with hyaline membrane disease.

**Results:** The results showed the highest incidence of hyaline membrane disease of degree 1 and 2 (70%). Most samples with birth weight  $\leq$  1500 grams (56.7%), gestational age  $\geq$  30 weeks (66.7%), and without a history of maternal hypertension (56.7%). Based on the test, there is a significant relationship between LBW to the degree of HMD ( $p = 0.020$ ;  $r = 0.392$ ); age of birth to the degree of HMD ( $p = 0.011$ ;  $r = 0.420$ ); history of maternal hypertension to the degree of HMD ( $p = 0.013$ ;  $r = 0.414$ ). As for the confounding factors of preeclampsia, method of delivery and gender were found to be not significantly related to the degree of HMD ( $p > 0.05$ ) in this study.

**Conclusion:** There is a significant relationship between infant birth weight, infant birth age, and maternal history of hypertension with the severity of hyaline membrane disease. While the history of maternal preeclampsia, method of delivery, and gender were not significantly associated with the severity of hyaline membrane disease.

**Keywords:** *Risk Factors, Hyaline Membrane Disease, Chest X-ray, Premature Infants*