

# Insidens dan faktor risiko pneumonia aspirasi pada anak dengan palsy serebral = Incidence and risk factors of aspiration pneumonia in children with cerebral palsy

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## Abstrak

[<b>ABSTRAK</b><br> Latar Belakang Masalah saluran napas yaitu pneumonia aspirasi merupakan masalah utama berkaitan dengan kualitas hidup morbiditas dan mortalitas pada anak palsy serebral PS Faktor yang berperan terhadap timbulnya pneumonia aspirasi antara lain adalah kelemahan otot napas gangguan koordinasi menelan refluks gastro esofagus status gizi dan imunitas yang kurang baik Namun hingga kini belum ada data seberapa besar insidens pneumonia aspirasi pada anak dengan PS di Indonesia dan faktor risiko yang berhubungan Tujuan Mengetahui insidens pneumonia aspirasi pada anak dengan PS dan hubungan faktor risiko dengan kejadian pneumonia aspirasi Metode Penelitian ini adalah studi kohort prospektif untuk menilai insidens pneumonia aspirasi dan studi potong lintang untuk menilai faktor risiko pneumonia aspirasi Penelitian ini dilakukan di Ruang Rawat Inap dan Klinik Neurologi Departemen Ilmu Kesehatan Anak Rumah Sakit Cipto Mangunkusumo Waktu rekrutmen penelitian 1 Maret 31 Maret 2015 Waktu pengamatan tanggal 1 April 30 September 2015 Terhadap subyek dilakukan anamnesis termasuk penilaian faktor risiko dengan Dysphagia Disorder Survey pemeriksaan fisis dan R ntgen toraks sebagai data awal selanjutnya subyek diamati selama 6 bulan untuk mengevaluasi adanya pneumonia aspirasi Hubungan bivariat antara kejadian aspirasi dan faktor risiko dilakukan dengan uji Fisher dan Mann Whitney sedangkan analisis multivariat dilakukan dengan regresi logistik Hasil Total subjek penelitian adalah 40 anak dengan PS Dua subjek mengalami drop out karena meninggal dunia dan dua subjek loss to follow up sehingga terdapat 36 pasien yang berhasil diamati hingga enam bulan Sebanyak 8 dari 36 22 2 pasien pada penelitian ini mengalami kejadian aspirasi baik silent aspiration 5 5 maupun pneumonia aspirasi secara klinis 19 4 Derajat beratnya PS berhubungan dengan pneumonia dan silent aspiration p 0 040 sedangkan pneumonia dan silent aspiration tidak berhubungan dengan gangguan koordinasi menelan p 0 2 dan status gizi p 0 107 Simpulan Insidens pneumonia aspirasi pada anak PS adalah 22 2 dengan derajat beratnya PS sebagai faktor risiko terjadinya PS <b>ABSTRACT</b><br> Background Respiratory problems such as aspiration pneumonia are major morbidities and mortalities in children with cerebral palsy and play major role in the quality of life of these children Several risk factors may contribute to these problems including respiratory muscle weakness dysphagia gastro esophageal reflux disease nutrition and immune problem Nevertheless there are still no data on the incidence and risk factors of aspiration pneumonia in children with cerebral palsy in Indonesia Aim To determine the incidence and risk factors of aspiration pneumonia in children with cerebral palsy Method Incidence of pneumonia was studied prospectively and the prevalence of the risk factors was studied as cross sectional Subjects were recruited from March 1st ndash 31st 2015 through Neurology Clinic and Pediatric Ward Cipto Mangunkusumo Hospital At baseline we evaluate history physical examination risk factors using Dysphagia Disorder Survey and chest X ray to evaluate the incidence of silent aspiration Subjects were followed up for six months to determine the incidence of aspiration pneumonia Analysis of the risk factors contributing to aspiration pneumonia were tested using Fisher rsquo s exact test and Mann Whitney Multivariate analysis was tested using logistic regression Result

A total of 40 children with cerebral palsy were recruited. Two subjects died during follow up and two subjects were lost to follow up giving a total of 36 subjects who completed the study. Eight out of 36 subjects (22.2%) had one or more episodes of aspiration consisting of silent aspiration (5/5) and clinically diagnosed aspiration pneumonia (19/4). Gross motor function was statistically significant as a risk factor of aspiration pneumonia ( $p = 0.040$ ) while dysphagia ( $p = 0.2$ ) and nutritional status ( $p = 0.107$ ) were not associated with pneumonia and silent aspiration. Conclusion: Incidence of aspiration pneumonia and silent aspiration in children with cerebral palsy is 22.2% with gross motor function as a risk factor. Background: Respiratory problems such as aspiration pneumonia are major morbidities and mortalities in children with cerebral palsy and play a major role in the quality of life of these children. Several risk factors may contribute to these problems including respiratory muscle weakness, dysphagia, gastro esophageal reflux disease, nutrition, and immune problem. Nevertheless, there are still no data on the incidence and risk factors of aspiration pneumonia in children with cerebral palsy in Indonesia. Aim: To determine the incidence and risk factors of aspiration pneumonia in children with cerebral palsy. Method: Incidence of pneumonia was studied prospectively and the prevalence of the risk factors was studied as cross sectional. Subjects were recruited from March 1st to 31st 2015 through Neurology Clinic and Pediatric Ward Cipto Mangunkusumo Hospital. At baseline we evaluate history, physical examination, risk factors using Dysphagia Disorder Survey and chest X ray to evaluate the incidence of silent aspiration. Subjects were followed up for six months to determine the incidence of aspiration pneumonia. Analysis of the risk factors contributing to aspiration pneumonia were tested using Fisher's exact test and Mann-Whitney. Multivariate analysis was tested using logistic regression. Result: A total of 40 children with cerebral palsy were recruited. Two subjects died during follow up and two subjects were lost to follow up giving a total of 36 subjects who completed the study. Eight out of 36 subjects (22.2%) had one or more episodes of aspiration consisting of silent aspiration (5/5) and clinically diagnosed aspiration pneumonia (19/4). Gross motor function was statistically significant as a risk factor of aspiration pneumonia ( $p = 0.040$ ) while dysphagia ( $p = 0.2$ ) and nutritional status ( $p = 0.107$ ) were not associated with pneumonia and silent aspiration. Conclusion: Incidence of aspiration pneumonia and silent aspiration in children with cerebral palsy is 22.2% with gross motor function as a risk factor. Background: Respiratory problems such as aspiration pneumonia are major morbidities and mortalities in children with cerebral palsy and play a major role in the quality of life of these children. Several risk factors may contribute to these problems including respiratory muscle weakness, dysphagia, gastro esophageal reflux disease, nutrition, and immune problem. Nevertheless, there are still no data on the incidence and risk factors of aspiration pneumonia in children with cerebral palsy in Indonesia. Aim: To determine the incidence and risk factors of aspiration pneumonia in children with cerebral palsy. Method: Incidence of pneumonia was studied prospectively and the prevalence of the risk factors was studied as cross sectional. Subjects were recruited from March 1st to 31st 2015 through Neurology Clinic and Pediatric Ward Cipto Mangunkusumo Hospital. At baseline we evaluate history, physical examination, risk factors using Dysphagia Disorder Survey and chest X ray to evaluate the incidence of silent aspiration. Subjects were followed up for six months to determine the incidence of aspiration pneumonia. Analysis of the risk factors contributing to aspiration pneumonia were tested using Fisher's exact test and Mann-Whitney. Multivariate analysis was tested using logistic regression. Result: A total of 40 children with cerebral palsy were recruited. Two subjects died during follow up and two subjects were lost to follow up giving a total of 36 subjects who completed the study. Eight out of 36 subjects (22.2%) had one or more episodes of aspiration consisting of silent aspiration (5/5) and clinically diagnosed aspiration pneumonia (19/4). Gross motor function was statistically significant as a risk

factor of aspiration pneumonia  $p = 0.040$  while dysphagia  $p = 0.2$  and nutritional status  $p = 0.107$  were not associated with pneumonia and silent aspiration Conclusion Incidence of aspiration pneumonia and silent aspiration in children with cerebral palsy is 22.2% with gross motor function as a risk factor , Background Respiratory problems such as aspiration pneumonia are major morbidities and mortalities in children with cerebral palsy and play major role in the quality of life of these children Several risk factors may contribute to these problems including respiratory muscle weakness dysphagia gastro esophageal reflux disease nutrition and immune problem Nevertheless there are still no data on the incidence and risk factors of aspiration pneumonia in children with cerebral palsy in Indonesia Aim To determine the incidence and risk factors of aspiration pneumonia in children with cerebral palsy Method Incidence of pneumonia was studied prospectively and the prevalence of the risk factors was studied as cross sectional Subjects were recruited from March 1st ndash 31st 2015 through Neurology Clinic and Pediatric Ward Cipto Mangunkusumo Hospital At baseline we evaluate history physical examination risk factors using Dysphagia Disorder Survey and chest X ray to evaluate the incidence of silent aspiration Subjects were followed up for six months to determine the incidence of aspiration pneumonia Analysis of the risk factors contributing to aspiration pneumonia were tested using Fisher s exact test and Mann Whitney Multivariate analysis was tested using logistic regression Result A total of 40 children with cerebral palsy were recruited Two subjects died during follow up and two subjects were loss to follow up giving a total of 36 subjects who completed the study Eight out of 36 subjects 22.2% had one or more episodes of aspiration consisting of silent aspiration 5.5% and clinically diagnosed aspiration pneumonia 19.4% Gross motor function was statistically significant as risk factor of aspiration pneumonia  $p = 0.040$  while dysphagia  $p = 0.2$  and nutritional status  $p = 0.107$  were not associated with pneumonia and silent aspiration Conclusion Incidence of aspiration pneumonia and silent aspiration in children with cerebral palsy is 22.2% with gross motor function as a risk factor ]