Background
Neonatal abstinence syndrome (NAS) is a complex of symptoms in newborns exposed to substances/drugs in-utero or after birth. Clonidine is a central alpha-2 agonist and recent studies have shown it can decrease NAS symptoms in opiate withdrawal.

Objective
To determine the efficacy of clonidine as an adjunctive agent to phenobarbital (PB). To elucidate demographic factors, maternal drug profile, nature of the symptoms in infants. To compare NAS profile with PB and PB+clonidine. To show associated side effects with clonidine.

Design/Methods
Retrospective review of infants ≥ 35 weeks GA admitted to HSC, Winnipeg from January 2005 to July 2010. Abstinence scores 20 hours before and 40 hours after PB and PB+clonidine were measured by Finnegan scoring system and compared by ANOVA.

Results
Twenty four infants (GA 39.3±1.4 wks, BW 3316±595g) were treated by PB-clonidine combination. Fifty eight percent exposed to multiple drugs. Methadone was the most common drug of exposure. Tremor, increased tone, regurgitation and poor feeding were common symptoms. When PB was used alone as initial therapy, NAS scores increased from 6.9±3.5 to 7.5±5.0 (p=0.05) at pre and post medication periods respectively. Clonidine was added to PB at 3.5 to 5.3 mg/kg/day and NAS scores were decreased from 7.3±4.7 to 7.3±5.5 (p<0.001). There were no recorded side effects for clonidine.

Conclusions
Our study suggests that clonidine may be a useful adjunctive treatment of NAS in infants who respond incompletely to PB. Cardiovascular side effects were not common in our study.

1648 CLINICAL COURSE AND DRUG SUSCEPTIBILITY FOR INFANTS WITH UREAPLASMA INFECTION
doi:10.1136/archdischild-2012-302724.1648

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Objectives
Ureaplasma species were associated bronchopulmonary dysplasia in preterm infants. We aim to analyze the antibiotic susceptibility of ureaplasma urealyticum and clinical manifestations in preterm infants with ureaplasma urealyticum colonization.

Methods
In a retrospective study, 416 preterm infants (<32 weeks) and their mothers admitted to Severance Children’s Hospital and Gangnam Severance Hospital NICU between Jan 2008, to Jun 2011, were reviewed. Ureaplasma test was done by culture for mothers and PCR in urine and tracheal aspirates for preterm infants. Ureaplasma colonization was confirmed 7.5% of infants, and 31% of the mothers. If positive result was noted, all infants were initially treated with erythromycin empirically.

Results
Thirty one infants who had positive ureaplasma PCR test (28±3±3.1 wk, 1050±490g) and 385 infants with negative test (29±0±3.2 wk, 1190±550g) were recruited as controls. Infants with ureaplasma infection had longer durations of oxygen administration (p=0.039) and mechanical ventilation (p=0.041). The incidence of pathologic chorioamnionitis were significantly higher (p<0.001).

Infants with ureaplasma infection had higher incidence of moderate/severe BPD. For antimicrobial susceptibility, 23% of erythromycin resistance, 16% of zithromycin resistance, 35% of ciprofloxacin resistance and no jasamycin resistance were shown. Among 31 infants with erythromycin treatment, 18 (58%) of susceptible, 6 (19%) of intermediate were cured after 13 days of treatment, and 4 showed poor response erythromycin treatment, 2 changed to jasamycin and 2 infants to clarithromycin and all were completely treated.

Conclusion
Ureaplasma colonized infants showed higher incidence of BPD. Proper antimicrobial use may reduce the morbidity associated with ureaplasma colonization.

1649 RETROSPECTIVE ANALYSIS OF DOXAPRAM FOR THE TREATMENT OF APNEA OF PREMATURETY
doi:10.1136/archdischild-2012-302724.1649

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Background
Only one small randomized controlled study on doxapram to treat apnea of prematurity is available. Before the implementation of a local treatment protocol, we aimed to evaluate the frequency of administration of doxapram in our NICU. We asked, if frequency and severity of apneas were affected by doxapram, if intubation for apnea was avoided, and if side effects occurred.

Methods
We retrospectively analysed all premature infants <30 weeks treated with doxapram during 03/2008 to 03/2010. We registered the number of apneas, bradycardias, and desaturations, an hour before, at the start of, and during 48 hours after onset of treatment.

Results
17 of 64 (27%) infants (mean gestational age 26.1 weeks, mean birth weight 735g) were treated during two years. All of them had been treated with caffeine before doxapram was applied. 70 therapy courses of 16 infants were analysed. In 8 of 70 (11%) therapy courses, infants were intubated because of apnea during 48 hours of doxapram treatment. The frequency of apneas (2.24 vs. 0.17), bradycardias < 80/min (0.93 vs. 0.14), and desaturations

Discussion
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