1135 RESPONSE TO A BOOSTER DOSE OF H. INFLUENZAE TYPE B CAPSULAR POLYSACCHARIDE-DIPHTHERIA TOXOID CONJUGATE VACCINE (PRP-D) IN CHILDREN INITIALLY IMMUNIZED AT 9-14 MONTHS. Martha Lepow, Lance Gordon, and Joel Samuelson. Albany Medical College, Department of Pediatrics, Albany, NY; and Connaught Laboratories, Toronto, Canada and Swiftwater, PA.

Thirty 9-14 month olds received 2 doses of PRP and 30 PRP-D intramuscularly 1 month apart in mid-1983, and were given a single dose (booster) of PRP-D 1 year later. Reactions were monitored for 24-48 hours. Sera were obtained prior to each immunization, 1 month post second dose and booster and tested for anti-PRP antibody by Farr or SPRIA techniques. Only mild local reactions, mainly erythema, were noted post booster in 25% of both groups. No febrile or systemic reactions were reported. 1 month post second dose, PRP recipients had a mean anti-PRP concentration of 0.08 ug/ml which fell to 0.04 ug after 1 year. The percent with 1 ug/ml anti-PRP fell from 22% at 1 month post second dose to 9% at 1 year. Among PRP-D recipients, mean levels of anti-PRP fell from 4.8 ug/ml at 1 month post second dose to 1.2 ug at 1 year. 86% had anti-PRP of $\geq$ 1 ug/ml 1 month post second dose compared with 59% at 1 year, but none had less than 0.15 ug/ml. 1 month following a booster dose of PRP-D, geometric mean anti-PRP concentrations were 8.6 and 71.1 ug/ml (p=0.001) for prior PRP and PRP-D recipients respectively. 90% of the prior PRP recipients reached 1 ug/ml compared with 100% of the prior PRP-D group. Prior PRP and PRP-D recipients responded equally with IgM as well as IgG antibodies. IN CONCLUSION: A PRP-D booster at 2 years of age to children who previously received 2 doses of PRP-D or PRP 1 year previously was well tolerated and resulted in a high level of antibody.

1136 COLONIZATION AND INFECTION RELATED TO CONTAMINATED ENTERAL FEEDINGS. Edward B. Lewin, Ronald Zack, Henry Ford Hospital, Department of Pediatrics, Detroit, MI. (Spon. by Lester Weiss)

Although tube feeding formulae are known to frequently be contaminated with bacteria, few cases of sepsis related to tube feedings have been reported. A premature infant admitted to the Special Care Nursery appeared to develop sepsis in this manner. She had received hyperalimentation for one month followed by enteral tube feedings of Pregestimil^{R} formula. One month later, she became septic; E. cloacae and K. pneumoniae were isolated from the blood. E. cloacae and P. aeruginosa were isolated from the stool. Samples of the formula, which had been distributed to the patient unit, as well as a portion which had remained in the pharmacy after mixing, were cultured and found to contain the following: E. cloacae (10^5 cfu/ml), P. aeruginosa (3-5x10^4 cfu/ml), K. pneumoniae (2-8x10^4 cfu/ml), and A. calcoaceticus, var. antratus (.5-8x10^4 cfu/ml). Since the formula was found to be contaminated while still in the pharmacy where it had been mixed, investigations focused on the preparation of the formula. Formula had been prepared from a powder using utensils and a technique considered "clean" but not sterile. Changes were introduced to insure a 3 minute hand scrub prior to mixing, the use of sterile and/or disposable utensils, disinfection of the work areas and the mixing of formula under a laminar flow hood. Subsequent cultures of formula remained negative and no further cases were seen over the ensuing 12 months.

1137 CATHETER-RELATED INFECTION IN INFANTS DUE TO AN UNUSUAL LIPOPHILIC YEAST - MALASSEZIA FURFUR. John G. Long, Harry L. Keyserling (Spon. by Andre J. Nahmias), Emory University School of Medicine, Department of Pediatrics, Atlanta, GA

Malassezia furfur, a lipophilic yeast of the genus Pityrosporum, causes tinea versicolor and only rarely invasive infections. Between Sept. 1983 and Aug. 1984, M furfur was isolated from blood cultures obtained during 5 episodes of suspected sepsis in 4 hospitalized infants with central venous catheters. The yeast usually grew slowly and was not evident in broth unless subcultured on Sabouraud's medium with sterile olive oil. In 4 of the 5 episodes, a simultaneous buffy coat Gram stain of blood from the central catheter also demonstrated the yeast. All patients had been hospitalized since birth and were receiving prolonged hyperalimentation therapy, including an intravenous fat emulsion. The infection generally presented as fever without focal findings; one afebrile infant developed episodes of apnea and bradycardia. Thrombocytopenia was a prominent finding in 3 of 4 patients. Patients responded rapidly to removal of the infected catheter and/or discontinuance of fat therapy. Amphotericin B was administered in three episodes. Since M furfur requires an exogenous source of long chain fatty acids for growth, the pathogenic potential of this yeast may be related to the introduction of intravenous fat therapy. This yeast infection may be more common than heretofore appreciated. Since routine cultures may be negative or growth may be poor, the use of buffy coat Gram stains and subcultures onto lipid enriched media should help greatly in its recognition.

1138 INTERACTION BETWEEN CHLORAMPHENICOL AND ACETAMINOPHEN. S.R. Martin, J. Spika, D. Davis, K. Beharry, J. Rex, J.V. Aranda. Dept. of Ped. McGill Univ. - Montreal Child Hosp Res Institute, Montreal, Canada.

The effect of acetaminophen on chloramphenicol (chloro) plasma clearance was evaluated in 5 patients ages 2½-5 yrs. being treated for invasive H-influenzae disease (4 Epiglottitis, 1 Meningitis). Acting as their own controls each patient received chloro I.V. 80 mg/kg/24 hrs. in 4 doses 48-72 hrs. prior to sampling at 30 mins. 1, 2, 3, 4, 6 hrs. post infusion. Kinetic data were similarly obtained following p.o. Acetaminophen 50 mg/kg/24 hrs. given 30 mins. prior to chloro for 48 hrs. before sampling. HPLC was used to determine acetaminophen, chloro and chloro succinate levels. Kinetic variables were analysed assuming a one compartment open model, using areas under the time concentration curve.

Kinetic Variable	Chloro	Chloro + Acetaminophen	P
AVD (1/kg)	4.6 ± 0.8	5.8 ± 1.0	NS
$t_{\frac{1}{2}}$ (h)	3.06 ± 1.18	0.56 ± 0.11	0.02
CL (1/kg/hr)	1.08 ± 0.1	3.45 ± 0.57	<0.01
$AUC^{0-6\ hrs}$ (mg/l/hr)	77.6 ± 8.7	26.6 ± 5.3	<0.001

Extrapolation from 0 to ∞ produced similar results. Data show that acetaminophen increases plasma clearance of chloro mainly by increasing Kel (h^{-1}) with little effect on AVd. Acetaminophen and chloramphenicol are commonly used medications. When used in combination we suggest that plasma concentrations of chloramphenicol be monitored to assure efficacy of antibiotic therapy.

1139 **DIFFERENCES IN SILASTIC CATHETER RELATED INFECTION - CANCER PATIENTS VS NON-CANCER PATIENTS.** Susan G. Mazo, Patty J. Baker, Arnold G. Coran, and Thomas C. Shope. C.S. Mott Children's Hospital, University of Michigan Medical Center, Ann Arbor, MI.

Infection of indwelling silastic central venous catheters (SCVC) in pediatric patients is a common complication. A retrospective study involving 86 patients was performed to compare SCVC associated infections between children receiving chemotherapy and children without cancer. All underwent SCVC placement in the OR between 6/81-12/83. Data subsequent to the placement of 102 catheters was analyzed.

Exit site swelling, previous catheter repair or occlusion were found to increase the incidence of SCVC related infection. No statistically significant differences were found in either the incidence or the location (exit site or blood) of infection in either group. The 53 pts receiving cRX exhibited a 27% (17 infect/62 catheters) infection rate (13/17 were bacteremic). There were 8.1 bacteremic episodes and 2.5 exit site infections per 100 catheter days. Similarly, the 33 non-cancer pts exhibited a 22% (9 infect/40 catheters) infection rate (6/9 were bacteremic). These pts had 8 bacteremic episodes and 4 exit site infections per 100 catheter days. However, the organisms causing sepsis in each group were different. In children without cancer, sepsis was caused only by fungus and gram positive organisms: Staph species (50%) C. albicans (33%), enterococcus and Candida (17%). Gram negative bacteremia occurred only in cancer pts: Gram negatives (23%), Staph species (46%), Strep (23%), Candida and S. aureus (8%).

These data demonstrate that SCVC placement is associated with similar infection risks in both cancer and non-cancer pts, although the spectrum of organisms causing infection differs between the two groups.

1140 THE EFFECT OF AN ANTIVIRAL AGENT (WIN 51,711) ON COXSACKIEVIRUS A9 INFECTION IN SUCKLING MICE. Ross E. McKinney, Jr., Thomas J. Maroon, and Catherine M. Wilfert. Duke University Medical Center, Department of Pediatrics, Durham, North Carolina.

WIN 51,711 is an antiviral agent with demonstrated in vitro activity against a number of Picornaviruses, including Coxsackievirus A9 (CA9). The drug has proved to be effective in animal model studies against Echovirus 9 and Poliovirus 2 infection in mice. This study used white Swiss mice which were infected with CA9 when they were between 24 and 48 hours of age. The LD_{50} for these mice was established as 1.8 x 10^5 TCID, and this quantity of virus was injected intraperitoneally (ip). Several routes of delivery of the drug have been tested. Giving 100 mg/kg/day of the drug in a 1% gum tragacanth suspension as a single daily ip injection led to significent delay in weight gain and mortality approaching 50%. Reducing this dose to 50 mg/kg/day ip appeared to alleviate this problem, as did delivering 100 mg/kg/day subcutaneously instead of ip. In the limited numbers of mice studied to date, protection against mortality using the latter two routes is 100%. Administering 100 mg/kg/day po once daily in a 1% gum tragacanth suspension had no effect on animal growth, but also provided no protection against mortality or symptomatology. It is hypothesized that this lack of effect reflects either poor absorption via the po route in suckling mice, or the shorter half-life of the drug when administered in oral boluses instead of ip or subcutaneous deposition. The toxicity of the 100 mg/kg/day dose ip appeared to be mechanical, since eventually crystals could be seen to accumulate in the peritoneum.