EFFICACY OF AN ANTIHISTAMINE/DECONGESTANT IN TREATMENT OF OTITIS MEDIA. J.E. Randall and J.O. Hendley, (Intr. by Ann Johanson), Dept. Ped., Univ. of Va., Charlottesville.

The value of an antihistamine/decongestant mixture (Dimetapp) in the treatment of otitis media was tested in a controlled, double-blind trial in a private pediatric practice. The diagnosis of otitis in the 62 patients was based on the presence of a red tympanic membrane (TM) with distorted landmarks. Patients were randomly assigned to receive either drug or placebo (the drug vehicle); the amount of medication remaining at the end of treatment was monitored. All patients also received either ampicillin or penicillin on a standard regimen. Response to treatment was assessed by re-examining TM's early (2-5 days) and late (13-16 days). Drug and placebo groups were similar in age and presence of fever at diagnosis. Treatment failure, judged by persistence of fluid in the middle ear after two weeks, occurred in 11/34 (32%) of the drug and 7/28 (25%) of the placebo group. Symptomatic response to treatment was similar in both groups.

Fifteen additional patients with myringitis alone (red, painful TM with no distortion of landmarks) were treated in similar fashion but received no antibiotic. Two (29%) of seven who received the drug developed otitis media requiring antibiotics, whereas 6/8 (75%) who received placebo developed otitis (p=.10,Fisher Exact Test). An antihistamine/decongestant mixture appeared to be of no value in patients with otitis on antibiotics, but it may have a role in preventing the development of otitis.

EPIDEMIOLOGY OF ESCHERICHIA COLI K1 COLONIZATION IN NEWBORN INFANTS. Larrie D. Sarff and George H. McCracken, Dept. Ped., Univ. of Texas Southwestern Med. Sch., Dallas, Texas, John B. Robbins, Bethesda, and Ida and Frits Orskov, Copenhagen.

Previous clinical and laboratory studies have shown the E. coli (EC) capsular polysaccharide antigen K1 to be a virulence factor in neonatal meningitis. A prospective study of the factors influencing EC K1 colonization of neonates was undertaken. EC K1 colonies were identified on specific antibody-impregnated agar. The prevalence rate of K1 strains among 389 babies from 9 geographically distinct nurseries was 0 to 31% (mean 16%). Weekly surveillance of 93 healthy prematures during an 8 week period demonstrated EC K1 in 20 to 45% of rectal cultures. Similar K1 isolation rates from rectal cultures of term infants were observed and varied within the same nursery related to crowding conditions. Early acquisition of EC K1 was usually from maternal sources while delayed colonization (30% of neonates) was more likely from nosocomial sources. 11% of EC from 209 pregnant women with urinary tract infection contained K1 suggesting the genitourinary tract as a possible source of infant infection. 7 of 9 infants with EC K1 sepsis or meningitis had identical EC K1 recovered from maternal rectal cultures; with 1 infant an identical EC K1 was cultured from blood, gastric aspirate, placenta and infant and maternal rectal cultures.

PREVALENCE OF TOXOPLASMOSIS IN PREGNANT WOMEN: THE CAT AS A VECTOR. David W. Reynolds, Sergio Stagno, Katherine G. Stubbs and Charles A. Alford, Univ. of Ala. in Birmingham, Sch. of Med., Dept. of Ped., Birmingham, Alabama.

A sero-epidemiologic study of toxoplasmosis employing indirect fluorescent antibody revealed a positivity rate of 23.4 percent among 799 indigent, young, predominately black pregnant women in Birmingham. Previous infection was not influenced by race but quite surprisingly, the incidence was significantly greater in the 289 subjects, 17 yrs. or less, than in their 477 older cohorts, 30.4 vs 20.4 percent, respectively. The geometric mean antibody titers, however, were quite similar in the 2 groups (44 vs 39). A retrospective telephone survey regarding cat and dog exposure, rural residence, and meat cooking preference was conducted among 360 of the above women. The surveyed subgroup was comparable to the larger population with respect to age, race, and incidence of infection. A history of a cat in the home was elicited from 44 percent of infected women, as compared to only 22 percent of antibody negative subjects (X^2=16, p<.001). In contrast, routine dog exposure (30 vs 23%), rural residence (29 vs 23%), and eating undercooked meat (8 vs 7%) could not be implicated as sources of infection in this population. These data support the concept that cats play an important role in the transmission of human toxoplasmosis. Cat contact, however, did not account for the increased prevalence in the younger vs older group (28.1 vs 32.6%).

GENITAL MYCOPLASMAS - ASSOCIATION WITH CHORIOAMNIONITIS Paul A. Shurin, Susan Alpert, Bernard Rosner, Shirley G. Driscoll and Edward H. Kass. Channing Laboratory, Boston City Hospital and Departments of Pediatrics, Pathology and Medicine, Harvard Medical School, Boston. Intr. by Jerome O. Klein.

Chorioamnionitis is associated with perinatal death, congenital pneumonia and neonatal septicemia. Most cases of chorioamnionitis cannot be clearly attributed to pathogenic bacteria. Genital mycoplasmas have occasionally been isolated from affected tissues.

To evaluate the possible association of genital mycoplasmas and chorioamnionitis, we have studied 249 consecutive live births. Mycoplasmas were grown from vaginal cultures of 73% of the mothers and from superficial cultures of 35% of their infants. When the histologic sections of the placentas were evaluated independently, 22% had significant polymorphonuclear cell infiltrates. M. hominis was isolated from 20.4% of infants whose placentas showed chorioamnionitis and from 14.6% of those with normal placentas (p>0.5). T-mycoplasmas were grown from 36.7% of infants with chorioamnionitis and from 19.3% of those without inflammation (p=0.016). Correction for the effects of birth weight, infant length, gestational age, duration of labor and of ruptured membranes, race, sex, prenatal care, and smoking history did not alter the significance of this association. These findings suggest that genital mycoplasmas may account for a substantial proportion of cases of chorioamnionitis.

ENTEROINVASIVE AND ENTEROTOXIGENIC E. COLI IN DIARRHEAL DISEASE. Raul C. Rudoy and John D. Nelson, Department of Pediatrics, Univ. of Texas Southwestern Med. Sch. at Dallas.

Previous studies have demonstrated the potentiality of E. coli to induce diarrhea either by enterotoxin production or by intestinal cell penetration. Both qualities have not been systematically explored in children with diarrheal disease. In this study we investigated 40 infants and children with acute diarrhea and 19 controls. From each patient's rectal swab culture 10 colonies of E. coli, randomly chosen from the EMB plate, were tested for enterotoxin production by intragastric inoculation in suckling mice and screened for cell penetration with HEP-2 cells. Colonies demonstrating invasiveness in HEP-2 cells were further tested by inoculation into guinea pig conjunctivae (Sereny test).

Salmonella or Shigella strains were isolated from 42.5% of the patients with diarrhea. Enterotoxin-producing strains of E. coli were found in 82% of the diarrhea group and in 42% of controls. Strains with capability to invade cells were found in 27.5% of the diarrhea group and in 10% of controls. Some strains of E. coli demonstrated both enterotoxin production and invasiveness; this has not been previously reported. In an overall view, considering Salmonella, Shigella, and enteroinvasive or enterotoxigenic E. coli, a definitive etiology was demonstrated in 95% of infants with diarrheal disease.

OROPHARYNGEAL EXCRETION OF EPSTEIN-BARR VIRUS BY PATIENTS TREATED WITH IMMUNOSUPPRESSIVE DRUGS. Norman J. Siegel, Barry Strauch, Linda-Lea Andrews and George Miller. (Intro. by C.D. Cook). Yale Univ.Sch.Med., Depts. Ped.,Med.,& Epidem.-Public Health, New Haven.

The excretion of Epstein-Barr virus (EBV) was measured in 80 individuals by the capacity of throat washings to induce long-term proliferation of human umbilical cord leukocytes and the appearance of EBV nuclear antigen in the cultivated cells. Forty-one patients were being treated with azathioprine (2 mg/kg/d) and/or prednisone (10-60 mg/d): of these 21 were renal transplant recipients and 20 had other diseases (18 systemic lupus erythematosus and 2 Goodpasture's syndrome). The other 39 subjects had never received immunosuppressive agents: 21 had chronic uremia and 18 were healthy controls. The excretion rates of EBV, based on single throat samples, were: renal homograft recipients 47%, other patients on immunosuppressive drugs 35%, patients with chronic uremia 14%, and healthy controls 17%. Excretion of EBV was found only in individuals with antibody to EBV capsid antigen, and the rate of excretion was three times greater in patients on immunosuppressive agents.

Five seropositive patients who were not excreting EBV received a renal homograft during the study. Two of these patients began shedding virus 8 and 34 days, respectively, after surgery and starting immunosuppressive therapy.

The results of this study are most compatible with the hypothesis that immunosuppressive drugs are associated with reactivation of latent EBV infections.