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PULMONARY HYPERTENSION(P-HTN) FOLLOWING BOLUS INFUSIONS OF PNEUMOCOCCUS(PNEU), OTHER GRAM+(GM+) BACTERIA, AND ZYMOSAN. K.A. Welch, G. Godoy, A. Dew, B.M. Gray, R.K. Lyrene, J.B. Philips (Spon. by G. Cassidy). Univ. of Alabama in Birmingham, Dept. of Peds., Bham, AL.

Group B Strep(GBS) infusions cause acute P-HTN in several animal models. This response includes increased pulmonary artery pressure (Ppa), and resistance (PVR), and decreased pulmonary flow; systemic flows are often decreased. We infused a bolus of PNEU in 2, <2-wk-old, acutely-operated, anesthetized lambs and found that P-HTN occurred. We then studied this effect in 2 unanesthetized, chronically-instrumented piglets, <1 mo. old. Infused bacteria were heat-killed, washed and resuspended in buffer. The pigs received 1 item/day at $3-4.5 \times 10^9$ particles/dose. Qualitatively similar severe P-HTN resulted from bolus infusions of all PNEU strains tested (P1, P14, and P23) also from Group E, Group G, and a nontypeable Group B Strep, Staph aureus, and zymosan. Agitation, cyanosis, systemic hypotension, bradycardia and seizures also occurred. Latex particles, similar size as bacteria, had no effect at this dose. A mild, transient rise in Ppa and PVR was noted after a double dose, suggesting that a quantity of particles alone doesn't produce the same P-HTN. Indomethacin blocked the P-HTN caused by PNEU. We conclude that P-HTN is a nonspecific host response that can be elicited by a variety of GM+ bacteria. Agent(s) that may trigger the response are not unique to GBS or endotoxin. Cyclooxygenase pathway products appear to mediate this P-HTN which may be clinically important in shock occurring with GM+ infections.

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ABSENCE OF HEPATIC CLEARANCE OF HAEMOPHILUS INFLUENZAE TYPE B (Hib) In RATS. B. Wiedermann, E. Mason, and S. Kaplan. Dept. of Pediatrics, Baylor College of Medicine, and Texas Children's Hospital, Houston.

In situ perfusions of livers in adult rats were performed using non-piliated (NP) & mannose-resistant pilated (MR) Hib compared to E. coli K12 NP, MR, & mannose-sensitive pilated (MS) strains. Following infusion of organisms via the portal vein, effluent was collected from the inferior vena cava during infusion of 100 ml. tissue culture medium. Total colony counts in the effluent expressed as per cent of number of organisms infused (mean values are listed where more than 1 animal was tested) were: Hib NP, 158% (3 animals); Hib MR 170% (2 animals); E. coli NP, 16% (3 animals); E. coli MR, 11% (1 animal); E. coli MS, 10% (2 animals). Similar results were obtained when whole animals (infant rats) were studied with quantitative blood cultures over a 30 min. period following IV administration of organisms. Hib MR strains recovered following *in situ* hepatic perfusions remained adherent to buccal epithelial cells, whereas many isolates of Hib MR strains in the live animal studies lost their pili. Adult rat livers do not effectively clear Hib NP or MR strains in this model. Further studies are needed to define the mechanisms by which Hib pili are lost or suppressed during bacteremia.

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CRYPTOSPORIDIOSIS IN CHILDREN. B.L. Wiedermann, B. Marino, and S.L. Kaplan. Department of Pediatrics, Texas Children's Hospital, Baylor College of Medicine, and Parasitology Section, Houston City Health Department, Houston.

Of 553 stool specimens from children under 18 years of age screened by a merthiolate-iodine-formalin technique at the Houston City Health Department from July to November, 1983, 5(0.9%) contained cryptosporidial oocysts, confirmed by auramine O and modified acid-fast stains. Patients ranged in age from 2 months to 2 years, and all were thought to be immunocompetent. Clinical illness consisted of watery diarrhea without blood or mucous (5 children), fever (4), vomiting (3), and abdominal pain (1), lasting from 10 days to 4 weeks. Stools were negative for other parasites and for Shigella, Salmonella, and Campylobacter organisms. None of the children had a history of animal exposure, and mode of acquisition could not be determined. Two children attended different day care centers. Cryptosporidium may be an important cause of diarrhea in normal children. Further studies are necessary to determine its exact role in diarrheal disease.

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ELIMINATION OF HEMOPHILUS INFLUENZAE TYPE B (HIB) PHARYNGEAL CARRIAGE FROM INDEX CASES OF HIB INVASIVE DISEASE: COMPARISON OF TWO RIFAMPIN (R) STRATEGIES. Raoul L. Wientzen, F. Ridgely Benton, Karina Butler, Mohsen Ziaei. Dept. of Pediatrics and Immunology Ctr., Georgetown Univ. Sch. Med. and Fairfax Hospital, Wash. D.C. (Spon. by J.A. Bellanti)

The American Academy of Pediatrics (AAP) Red Book calls for beginning R prophylaxis of Hib index cases prior to discharge from hospital. We randomized invasive Hib index cases into two groups: Group 1 (G1) received R 20 mg/kg/day x 4d concomitant with the last 4 days of systemic therapy; Group 2 (G2) received R the four days following systemic therapy. Throat cultures (TC) for Hib were obtained in all families not prophylaxed under AAP guidelines and in most members after empiric R; Hib positive contacts were treated with R to minimize index case reacquisition of Hib after hospital discharge. TC were obtained from index cases and most household members 5-16 days after R therapy. To date 33 children have been enrolled in the study and followup is complete in 29. Table 1 summarizes eradication data:

	G1	G2
% eradication index cases	100% 15/15	93% 13/14
% eradication - R given in hosp	100% 8/8	0/0
% eradication - R given at home	100% 7/7	93% 13/14
% household contact(+)Hib before R	13% 5/39	16% 7/42
% eradication contacts	100% 3/3	100% 7/7

The one index case R failure in G2 received an interrupted course of R at home. R is as effective in Hib elimination whether given during or after antibiotic Rx of invasive disease. Compliance in taking R at home may explain the one R failure in G2.

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AN ANIMAL MODEL OF KAWASAKI DISEASE. G. Keren, M. Wolman (Spon. by D. Schiff). Sackler School of Medicine, Tel-Aviv University, Dept. of Pathology, Tel-Aviv, Israel.

Kawasaki disease (KD) is a clinical pathological entity of unknown cause. Many investigators have proposed an infectious etiology. The pathological findings in KD and Pseudomonas septicemia have remarkable similarities. In both diseases a diffuse vascular involvement with little acute inflammatory reaction occurs, with necrosis and fibrin exudation in and around vessel walls.

We suggested that Pseudomonas sepsis might play a role in the pathogenesis of KD. We embarked on a series of experimental investigations aiming at the production of a disease process similar to KD by infecting animals with Pseudomonas bacilli (mucoid and non-mucoid strains). Treatment of mice and guinea-pigs previously infected with 10^8 organisms intra-peritoneally with either nitrogen-mustard or cyclophosphamide produced a slow disease. At the end of the second week, these animals exhibited severe vasculitis with little inflammatory reaction. Dilatation of blood vessels and formation of coronary aneurysms were obtained similar to the histological findings in patients with KD.

It is proposed that Pseudomonas aeruginosa infection in immunologically deficient animals, can mimic KD and a similar mechanism might be effective in the naturally occurring disease.

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POST-PARTUM MATERNAL RUBELLA IMMUNIZATION AND EFFECT OF BREAST FEEDING ON SUBSEQUENT IMMUNIZATION OF THE INFANTS. David T. Wong, Genevieve A. Losonsky, Harry Guess, Karen Hovey, and Pearay L. Ogra. Dept. Peds., SUNY at Buffalo, Merck, Sharp and Dohme, Westport, PA, and Children's Hospital of Buffalo, NY.

Groups of breast-feeding and non-breast (bottle) feeding mothers who were seronegative for rubella virus during pregnancy were immunized with subcutaneously administered live rubella virus vaccine during the immediate post-partum period. All infants of these women were subsequently immunized at 15 months of age with live measles, mumps and rubella vaccine. The rubella antibody activity in the mothers and the infants was determined by standard hemagglutination inhibition (HAI) test and enzyme-linked immunoassay (ELISA, IgG) before and six months after immunization. All infants developed significant rubella specific HAI and ELISA antibody response. The mean antibody titers in bottle-fed infants (HAI 77, ELISA 7961) were higher than breast-fed infants (HAI 69, ELISA 6400), although the difference was not statistically significant ($P>0.05$). These observations suggest that although shedding of infectious rubella vaccine virus in the breast milk has been associated with post-partum immunization of seronegative women, acquisition of the virus by the infants in the neonatal period does not appear to have significant adverse influence on the success of routine rubella immunization at 15 months of age. The importance of the subtle differences observed here remains to be defined.