

Fever and other symptoms of infection occur frequently after cardiac surgery in children. Attempts to recognize microbial agents in these patients are necessary for effective treatment. 650 children between 1 month and 16 years were treated by open heart surgery in our hospital from 1978 til 1984. Bacterial infections were analyzed in respect to the species of isolates, their antibiotic sensitivities, the site of infection, time of onset and age of the patient etc. Routine diagnostic procedures included blood culture techniques for aerobes, anaerobes and fungi, investigations of tracheal and wound secretions, pleural and pericardial exudates and of urine. Further tissue cultures and antibody assays were performed to exclude viral infections. In some patients postcardiotomy syndrome was diagnosed without detecting a bacterial or viral origin. The results of prophylactic treatment with antibiotic during and after cardiac surgery were evaluated. Failures of prophylaxis and therapy are described in some patients and conclusions are drawn for the choice of antibiotics for bacterial infections after cardiac surgery.

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Children infection by *Cryptosporidium* sp. have been communicated since 1976 usually associated to acute diarrhoeal disease. This protozoa has been isolated recently in SIDA patients with serious illness. Three new cases, the first of spanish pediatric literature, are described in this paper. Children were males; two of them twins. Age ranged 24 to 27 m. All lived in Valencia, and went to infant's school with high stand of living and domestic animal relationship. The most frequent symptom was well located colic abdominal pain with day predominance and 2 months of evolution in the twins. The third case began with abdominal pain and discomfort. Three months before had been treated with Metronidazol because *G. lamblia* infestation. All of them had irregular depositions, good nutritional status and normal abdominal examination findings. None had fever, proctitis, periarthritis, anemia, eosinophilia, ESR, rotavirus antibody tittle elevation or humoral and cellular immunity alterations. Another pathogenic agents were not isolated by bacteriologic or parasitologic study. *Cryptosporidium* was isolated by Ziehl modified technique (García et al, 1983) in three samples of stools. Recovery was spontaneous with only dietetic measures. Other authors report good results with spiramycin.

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Pulmonary complications of staph. osteomyelitis seem to be infrequent and are seldom related in wide reviews of this entity and in texts of infectious diseases. Cardiac complications are still more infrequently found. However our experience is far from this observation. We have found pneumonic interstitial infiltrates and/or asymptomatic pneumatoceles in about two thirds of children suffering from staph. osteomyelitis to whom we have taken a weekly chest radiograph while they were feverish. Severe forms are rare. Lately, however, we have treated 5 children with acute staph. osteomyelitis, aged 6 to 13, and with severe pulmonary and cardiac complications. They had broad bone lesions which affected (1) left femur and tibia, (2) right femur, (3) right tibia, (4) left femur, (5) left femur and fibula. Pulmonary and cardiac complications were respectively (1) pneumatoceles, bilateral pleural effusion, pericardial effusion, (2) pneumonia and pulmonary haemorrhage, cardiomegaly, heart failure and death, (3) bilateral pneumatoceles, right pleural effusion, left pyopneumothorax, cardiomegaly and heart failure, (4) interstitial pneumonia, cardiomegaly and heart failure, (5) right pneumatoceles, cardiomegaly. In all of them a coagulase positive staphylococcus aureus was isolated from the bone lesion exudate, blood and/or pleural fluid, and in the pulmonary tissue of the child who died. We would like to emphasize the high frequency of pulmonary lesions, mainly asymptomatic and the possibility of severe pulmonary and cardiac complications during the course of haematogenous osteomyelitis despite antistaphylococcal drugs and surgical therapy.

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A 7-year-old boy was diagnosed having non-Hodgkin malignant lymphoma with mediastinal and neck masses in April 1983. Primary remission was achieved by cytostatic therapy according to Wollner's protocol. Isolated CNS relapse occurred 11 months later while on maintenance treatment. Renewed induction treatment was given and CNS remission was achieved by intrathecal Methotrexate therapy followed by CNS irradiation. On July 4th 1984 a Rickham reservoir was inserted. Sudden onset of pyrexia occurred on August 1st 1984. This was followed by severe headache accompanied by repeated convulsions within few hours. Both CSF and blood cultures grew *Listeria monocytogenes* serotype 1. Decompressive ventricular puncture was performed daily and ampicillin treatment was given for 15 days. The Rickham reservoir was removed and the patient was on ventilator with pentothal anaesthesia. Sequential CAT scans of the brain followed by an angiography demonstrated an intracerebral lesion in the right hemisphere which decreased within 10 weeks. The boy developed hypothalamic appearance with adipositas, low body temperature, hemiparesis of the left side and a transient inappropriate ADH secretion. He remains in remission and is still on cytostatic drugs.

This case illustrates an unusual pattern of infection in the immunocompromised host.

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Since May 1979 all meningococcal strains isolated in the GDR have been investigated microbiologically in our institute. With a still low incidence a marked increase of meningococcal infections is observed. From a total of 650 strains sent to our institute up to 1984 515 could be serogrouped. 54 strains belong to the serogroup A, 293 to B, 124 to C, 2 to X, 8 to Y, 1 to Z, 30 to W 135 and 3 to 29E. There were no substantial changes in the distribution of the groups. In our study we tried to find out if there are correlations between the epidemiological and microbiological data. A record was made of the age distribution, clinical picture, regional distribution of cases and serogroups of isolated meningococcal strains. Rifampicin chemoprophylaxis of contacts introduced in 1981 has proved successful.

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The distribution of serotypes and biotypes of 148 strains of *H. Influenzae* (H.i.) isolated from paediatric (103) and adult (45) patients was studied in order to confirm the association of non serotypable strains with disease and to investigate the correlation between some biochemical properties of the strains and certain illnesses. The susceptibility of the isolates to ampicillin (AM), chloramphenicol (CAF), cefuroxime (CXM), ceftizoxime (CZX), cefotaxime (CTX) and ceftazidime (CAZ) was also tested. Serotyping was performed by coagglutination and biotyping by the method of Kilian and by API 20 E. MICs were determined by the agar dilution technique. In 3 patients with invasive diseases (sepsis, meningitis) only capsulated type b H.i. were isolated, while in noninvasive acute (19 conjunctivitis, 11 bronchopneumonia, 3 otitis media, 2 urethritis) and chronic (75 cystic fibrosis, 35 chronic bronchitis) diseases capsulated strains accounted for only 2/35 and 6/110 cases respectively. In patients with acute illnesses all the isolates belonged to biotypes I-II-III and did not produce lysine decarboxylase. In patients with chronic respiratory diseases 85/110 strains belonged to biotypes I-II-III while 25 were biotypes IV-V-VI; 43/110 produced lysine with decarboxylase. All AM resistant H.i. (3) were from patients with chronic respiratory illnesses. No CAF resistant H.i. was isolated. CZX was more active of the cephalosporins tested followed by CTX, CAZ, CXM. These data confirm that also noncapsulated H.i. can be pathogenic; their virulence might be related to (and perhaps predictable by) biochemical typing.