192 THE PHARMACOKINETICS OF CEFTAZIDIME AND OTHER B LACTAM ANTIBIOTICS IN PREMATURE NEONATES

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Ceftazidime(CAZ) is a broad spectrum antibiotic with activity against most neonatal pathogens including Ps.aeruginosa.It has proved efficacious in the treatment of infected neonates.The pharmacokinetics and safety of CAZ(25 mg/kg twice daily IV or IM were examined in 41 young premature neonates with clinical evidence of infection. CAZ was assayed in 46 series of blood samples by HPLC.Blood was collected before,during and after therapy for analysis of biochemical and haematological factors.Faecal specimens were examined for Cl.difficile and its toxin.Pharmacokinetic parameters were:CMAX=72 6mg/l;CMIN=17 2mg/l;TMAX=1.5 0.3hrs;T1/2=8.6 1.2hrs;total body clearance(CL)=0.8 0.07ml/min/kg).CMAX(IV) CAZ was 77 8mg/l and CMAX(IM) was 56 7 mg/l.Therapeutic serum levels were maintained throughout the dosage interval in all babies. CL of CAZ increased with increasing postnatal age (p<0.0001) but was unaffected by birthweight or gestational age. Serum urea,electrolytes,urine sp.gr and body temperature had no effect of CAZ pharmacokinetics.These data were compared with studies of comparable babies receiving cefuroxime(24),cefotaxime(17),latamoxef (27),and gentamicin(31). Therapy had no significant effect on haematological or biochemical parameters.There was no increase in the isolation of Cl. difficile from stools.CAZ is a safe and effective drug for use in the treatment of neonates.25 mg/kg administered b.d. results in adequate serum concentrations with no accumulation in babies <7 days old.The serum therapeutic ratio for ceftazidime against common neonatal pathogens is superior to that of gentamicin and penicillin/ampicillin.

193 A Placebo Controlled Trial of Ribavirin Aerosol in The Treatment of Acute Bronchiolitis

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A randomized double-blind study, comparing treatment with an aerosolized antiviral agent, Ribavirin, 20mg/ml saline, and aerosolized saline has been conducted in 26 infants (14 Ribavirin, 12 Placebo) with clinically diagnosed bronchiolitis. Nebulized Ribavirin or normal saline aerosol was given for 18 hours a day for at least 3 days. Identification of Respiratory Syncitial virus was made in nasal secretions from 20 cases (10 Ribavirin, 10 Placebo). Treatment was delivered for an average of 68 hours in the Ribavirin group and 65 in the Placebo group. Three times daily clinical assessment was made of the infants. Trends in 13 out of 14 clinical indices recorded favoured active treatment. Ribavirin aerosol was associated with significantly faster improvement and reduction in cough, crepitations, and respiratory rate (P<.05). In the 20 infants from whose nasal secretions RSV was identified most trends favoured Ribavirin treatment with reduction in chest recession reaching statistical significance (P<.05). No difference was found in the rate of clearance of respiratory syncytial virus. The treatment was well tolerated as judged clinically and from the results of haematological and biochemical studies. These observations suggest nebulized Ribavirin may have a place in the treatment of some cases of bronchiolitis.

194 TRIMETHOPRIM AND CO-TRIMOXAZOLE IN THE TREATMENT OF PNEUMONA IN CHILDREN: A DOUBLE-BLIND CLINICAL TRIAL

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We studied the results of a double-blind trial using trimethoprim (10 mg/kg/day) and co-trimoxazole (50 mg/kg/day) during 6 to 13 days in a group of 77 children with pneumonia, whose ages ranged from 12 months to 13 years. Clinical resolution was a little superior in the group treated with co-trimoxazole, whereas normalization of laboratory tests and clearness of roentgenological images were similar in both groups. Adverse side effects were present in only three cases (2 co-trimoxazole treated cases and 1 trimethoprim treated case), and all of them showed a transient increase of serum ALT and AST during 1 to 4 weeks. One patient in each group received amoxicillin and cefotaxime respectively, because a mild deterioration of the clinical condition and of the radiological images were noticed after 5 days of antibiotic therapy. These results show that trimethoprim and co-trimoxazole achieved similar therapeutic results in the treatment of pneumonia in children.

195 SULBACTAM/AMPICILLIN IN CHILDREN WITH BACTERIAL PNEUMONIA

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Sulbactam is a betalactamase inhibitor which in combination with Ampicillin expands the spectrum of the latter to include Ampicillin resistant germs. To document the efficacy and safety of Sulbactam/Ampicillin a clinical study was performed in 25 children suffering from pneumonia. The dosage of Sulbactam/Ampicillin was 50 mg Sulbactam/100 mg Ampicillin per kg per day administered in three divided doses. Clinical cure was achieved in 22 children and failure of treatment was observed in 3 children. Side effects occured in 2 patients in form of transient exanthema which did not necessitate termination of treatment. Slight and transient elevation of transaminases was observed in 4 children and transient eosinophilia occured in 2 patients. The results confirmed that Sulbactam/Ampicillin is an effective and well-tolareted treatment in children with pneumonia.

196 ALTERNATIVE THERAPY OF TYPHOID FEVER IN CHILDREN

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A total of 163 children with typhoid fever were treated with co-trimoxazole (sulfamethoxazole 50 mg/kg per day, trimethoprim 10 mg/kg per day divided into two daily doses) for 14 days. The diagnosis was confirmed by positive blood or stool cultures and/or by the titer of agglutinins. All patients had a favourable clinical response; fever disappeared between the 3rd and 5th day of therapy (average 5.1 days). Subjective improvement also occurred in a short period of time. When the temperature curve of these cases was compared to that from 100 cases treated with chloramphenicol (fever disappeared on an average of 7.4 days), co-trimoxazole seems to be a more effective antimicrobial agent. Recently, eight patients with typhoid fever were given trimethoprim alone (10 mg/kg per day) and we obtained similar good results that with the use of co-trimoxazole (fever disappeared on an average of 4.8 days)

197 EFFECTIVENESS SHORT PULMONARY TUBERCULOSIS TREATMENT IN CHILDREN.

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We report our results on 110 patients that attended our Hospital during a four years period(1981-84). The range age was between three months to 16 years.

Short treatment with INH+RMP during nine months, and also ETB or SM during the first three months, it was given to the first group of 61 patients. The same treatment during 12 to 18 months was done to a second group of 49 children.

After treatment suppression, both groups have been controlled at least during one year. At 9 months treatment normal clinical examination was found on all patients (110/110), and none showed relapse. Normal chest X-Ray examination was obtained on 48 over 61 patients of first group. On 12/61 patients it became normal between 10 and 16 months. On account of bronchiectasis abnormal images persisted in one case (1/61).

In the second group normal radiological exam was seen on 17/49 patients, when they finished 9 months treatment. And 26/49 patients obtained it, between 10 and 25 months. Remaining pathological images was due to bronchiectasis(3/49), pulmonary sequester(1/49), fibrocaseous tuberculosis(1/49) and tuberculous granuloma(1/49).

CONCLUSION: The above mentioned 9 months treatment is able to heal the disease on almost all cases. Though afterwards we recomend a follow-up during one year.