

Nosocomial Infections in Pediatric and Neonatal Ward of Umaid Hospital, Jodhpur: A Cross-sectional Study

Nosocomial infections are those that develop within the hospital or are produced by organisms acquired during hospitalization. These may involve the patients, medical and paramedical staff and others involved in patient care, viz., visitors, attendants, etc. Nosocomial infections are more frequent in pediatric patients because of their increased susceptibility(1).

This cross sectional study was undertaken to find out the prevalence of such infections, their causative agents and possible predisposing factors. The subjects of the study were all patients of Neonatal and Pediatric Ward of Umaid Hospital, Jodhpur who acquired pyogenic infections after 48-72 hours of admission on the day of study. A thorough clinical history was taken, attention was paid to use of intravenous therapy, steroids, antibiotics, instrumentation, prematurity and mode of delivery.

Appropriate culture specimens were collected and standard culture procedures were followed to identify the organisms(2). The "point prevalence rate of nosocomial infections was 25% in neonatal nursery and infections were mostly superficial in character, viz., cellulitis, conjunctivitis, umbilical sepsis and septicemia (half of the patients). Most of the babies were having low birth weight, were on steroids, intravenous fluids and getting systemic antibiotics. *Staph. aureus* was the most commonly isolated pathogen, followed by β -hemolytic streptococci, *Pseudomonas* and *E. coli*.

The "point prevalence rate" of nosocomial infections in Pediatric ward was

11.76%. The infections were commonly superficial at the site of intravenous cannulation and a case each of diarrhea and pneumonia was noted. Most of the children had some grade of malnutrition, were on intravenous fluids, systemic antibiotics and had poor personal hygiene. Steroids were being used in half of the cases and these patients were placed in the over crowded part of the Pediatric ward, viz., I.C.U. The commonest pathogen isolated in the study was β hemolytic streptococci, followed by *Staph. aureus*, *Pseudomonas*, *E. coli* and *Klebsiella*.

The reported incidence of nosocomial infections from other countries is 6.3% in USA(3), 14.4% in Belgium(4), 6.1% in Czechoslovakia(5) and 13.4% in Brazil(6). Nosocomial infection in the West occurs usually in susceptible patients (e.g., immunocompromised) and in USA strict nosocomial infection control procedures led to a reduction of 20-41% in infection rate(3).

The high incidence of nosocomial infections in neonates in this study seems to be related to their increased susceptibility rather than environmental factors because relatively more preventive measures were adopted in the neonatal nursery. This high rate of nosocomial infections is preventable and an "Infection Control Committee" should be instituted in all major hospitals to monitor and review cases of infection, to create awareness and to educate medical and paramedical staff about it.

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REFERENCES

1. Bennet JV, Brachman PS. Hospital Infections, 1st edn. Boston, Little Brown and Co, 1979, pp 36-38.
2. Cruickshank R, Duguid JP, Marmion BP, Swain RHA. Medical Microbiology (Vol II). Edinburg, Churchill Livingstone, 1975, pp 96-128, 170-182.
3. Goldman DA. Nosocomial infections in USA. J Hosp Infect 1986, 8: 116-128.
4. Mertens R, Kegels G, Stroobant A. The national prevalence survey of nosocomial infections in Belgium. J Hosp Infect 1987, 9: 219-229.
5. Sramova H, Bartonova A, Krecerova M, Subertova V. National prevalence survey of hospital acquired infections in Czechoslovakia. (Prague). J Hosp Infect 1988, 11: 328-334.
6. Wagner MB, Petrillo V, Gay V, Fagundes GR. A prevalence survey of nosocomial infections in a Brazilian hospital. J Hosp Infect 1990, 15: 379-381.

Sodium Valproate in Sydenham's Chorea

The conventional drug therapy of Sydenham's chorea includes the use of

drugs like phenobarbitone, chlorpromazine, diazepam and haloperidol. Recent reports indicate that sodium valproate is an effective drug in the management of abnormal movements in Sydenham's chorea(1-3). A brief account of the previously reported studies(1-3) along with our own experience of treating five cases of Sydenham's chorea with sodium valproate is presented in the *Table*.

The effectiveness of sodium valproate as an anticonvulsant is well known but its effectiveness in control of abnormal movements in Sydenham's chorea is of recent interest. The review of published reports(1-3) and our own experience of treating five cases of Sydenham's chorea with sodium valproate indicates that it is an effective drug in the control of movement disorders in Sydenham's chorea as well.

The precise mechanism by which sodium valproate controls involuntary movements is not known. However, sodium valproate is known to raise the level of gamma-aminobutyric acid (GABA), particularly in the striatum and substantia nigra(4). This increase may exert its effect through modification of the GABAergic synaptic transmission and hence control the abnormal movements. This effect on the basal ganglia may be totally different from the

TABLE—Summary of Earlier Reports and Our Experience

Author	No. of cases	Age range (years)	Duration of involuntary movements before valproate therapy	Dose of valproate	Response (in days)	Relapse (cases)
McLachlan(1)	1	19	8 weeks	250 mg BID	2	Nil
Dhanraj <i>et al.</i> (2)	5	11-18	5 days-130 weeks	15-20 mg/kg/day	5-10	Nil
Daoud <i>et al.</i> (3)	15	5-13	1-104 weeks	15-20 mg/kg/day	4-8	2
Present series	5	9-12	1-3 weeks	20 mg/kg/day	7-10	Nil