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Palatal Paralysis in Enteric Fever

Neurological involvement in enteric fever was described as early as in 1874 by Leydon(1). The commonest neurological manifestations in enteric fever in children are acute encephalopathy and meningismus. Perceptive nerve deafness, aphasia, convulsions, peripheral and cranial neuropathy, Guillian Barre Syndrome are all known to occur(1,2). Cerebellar ataxias complicating enteric fever are being increasingly reported in recent literature(3,4). However, to the best of our knowledge, isolated palatal paralysis as a complication of enteric fever has not been documented so far.

A 5-five-year-old girl was admitted with complaints of fever, abdominal pain of 7 days, vomiting and knee joint pain of 1 day duration. Clinical examination revealed a well nourished, conscious, febrile and ill looking child. She has a coated tongue, hepatomegaly (2 cm), splenomegaly (3 cm) and arthragia of right knee joint. A clinical diagnosis of enteric fever was confirmed by a positive blood culture for *Salmonella typhi* and widal (TO and TH 1 : 160). She did not respond to both furazolidone (10 mg/kg) and chloramphenicol (100 mg/kg) but later responded to cotrimoxazole (10 mg/

kg). On the 17th day of her illness she developed nasal twang in her speech and nasal regurgitation of fluids. Her ophthalmic fundi and CSF were normal. She was started on nasogastric feeds and 48 hours later she learnt to take oral feeds by herself keeping her head tilted back while taking feeds. She gradually improved and was discharged after one week and became completely normal within 4 weeks.

The predilection of typhoid toxins to nervous system is well known. It is said that all parts of central nervous system may be involved in enteric fever. Still the complications like transverse myelitis, cranial neuropathies and polyneuropathies are very rare. The commonest known causes of palatal paralysis are poliomyelitis affecting the upper part of the nucleus ambiguus in medulla, diphtheria affecting the nerve endings and brainstem infarction(5). Usually the neurological symptoms in enteric fever tend to occur early in the course of the disease, although the symptoms of acute cerebellar ataxia, aphasia, perceptive nerve deafness have been known to persist for long after the fever and toxicity subside, with eventual complete recovery as was also seen in our case. It is suggested that typhoid fever also should be considered in the differential diagnosis of paralysis of the palate.

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Efficacy of Hand Washing with Soap and Water as Compared to Antiseptic Solutions

Hospital acquired infections are one of the main causes of morbidity and mortality and the hospital staff can contribute to the transmission of organisms from infected patients and environment to noninfected patients(1).

In the present study, efficacy of routine hand washing with soap and water and antiseptics was studied in 12 medical personnel. The bacteria carried on the fingers per sq. cm. were counted before and after hand washing by 'Swab rinse method'. It consists of rubbing a sterilized swab thoroughly on six 1 × 1 cm squares of finger tips using templates and these swabs were transpired to 4 ml of sterile distilled water. One ml of this suspension was spread over

blood agar plates and incubated at 37°C for 24 hours. The number of colonies grown were counted and calculated to number of organisms per sq. cm of hand surface. Cultures were taken before hand washing, after washing with soap and water and later after washing with 5% Providone iodine W/v and 70% alcohol V/v(2).

The bacterial counts after hand wash with soap and water were reduced by 93.80% in doctors, 94.09% in nurses and by 87.77% in case of ward maids. A hand wash with 5% Povidone iodine W/v and 70% alcohol V/v reduced the counts by 99.77% in case of doctors, 99.83% in case of nurses and 98.32% in case of ward maids.

The organisms grown were identified as *Staph. pyogenes*, *Bacillus* spp., *Staph. epidermidis* from doctors and nurses. In case of ward maids *E. coli*, *Klebsiella* spp. and *Pseudomonas* were also recovered. After hand washing, mainly *Bacillus* spp. persisted in doctors and nurses but ward maids harboured *E. coli*, *Pseudomonas* and *Staph. epidermidis*.

There are two kinds of organisms on the hands: resident and transient flora. Most resident flora are found on the superficial skin surface but 10 to 20% of these are found in skin crevices and are not easily removed by scrubbing but can be inactivated by antiseptics(3,4).

Transient flora may consist of Streptococci, *E. coli*, *Staph. aureus* and *Pseudomonas*. Persons with eczematous dermatitic skin have *Staph. aureus* and Gram negative organisms which are difficult to remove with hand washing(5).

The reduction in bacterial counts on hands seen in this study is similar to other studies(3,4) and it is recommended that at least in neonatal units all personnel should wash their hands not only with soap and