MATERIAL & METHODS
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The present study was done from June 1987 to May 1988 in K.L.B. Medical College, Hospital, Jhansi (U.P.). It comprised of 225 patients of tetanus of all groups.

History

A detailed history was taken and special importance was given to the age, sex, address, occupation, socio-economic status, religious habits and religion.

Duration of onset of symptoms, portal of entry of infection, previous prophylactic immunization and any treatment taken before admission.

In case of tetanus neonatorum, place of delivery, the person who conducted the delivery (untrained or trained), instrument used to cut the cord (sterilized or unsterilized), any application over the cord and whether the mother was immunised or not during her antenatal period, was noted.

Physical Examination

One physical examination, stress was given on lock jaw, risus sardonicus, difficulty in deglutition, inability to suck, neck rigidity, opisthotonus, abdominal rigidity and spasms.
Apart from incubation period, period of onset and raised temperature were also noted.

In case of tetanus neonatorum special attention was given on the cry of the baby, inability to suck, posture, umbilical sepsis and prematurity of the baby. Patients were grouped according to age as:

(i) Tetanus neonatorum
(ii) Childhood tetanus
(iii) Adult tetanus

Patel and Joag's (1959) criteria of grading to assess the severity of disease was followed.

Criteria No. 1 - Presence of lock jaw (Inability to suck)

No. 2 - Spasms

No. 3 - Incubation period of 7 days or less.

No. 4 - Period of onset 48 hours or less.

No. 5 - Axillary temperature of 99°F or rectal temperature of 100°F or more on admission or within 24 hours of admission to the hospital.

One point was given to each criteria and the cases with all five points were classified as Grade V.

Cases with three points grade III and so on.

In childhood and adult tetanus some patients did not have any obvious cause but some had a prolonged history of ear discharge, and in such cases the incubation period remained undetermined.
Treatment Therapy

Those who had repeated spasms were kept on intravenous nutritional therapy and as the spasms became occasional or mild, the patients were put on ryles tube feeding. When patients were able to open their mouths satisfactorily, oral feeding was started.

Contaminated septic wounds were cleaned by hydrogen peroxide. Umblical cord was cleaned by rectified spirit and 1% gention violet was applied.

Patients were sedated by diazepam, to control spasms and rigidity, and the dose ranged from 0.3 mg to 1.0 mg per kg. of body weight depending upon the severity of rigidity and spasms. In adult dose given was from 2 to 20 mg every two to eight hours.

The cases, in which spasms were severe and were not controlled by diazepam, promethazine (50-250mg/day) was given in some cases along with other drugs.

Muscle relaxant, Methacarbamol (Robinax) 100-200 mg/kg of body weight per day (intravenously or orally) was given in divided doses form. Sedation and muscle relaxant, were gradually tapered, according to severity of spasms and convulsions.

Initially all patients were given crystalline penicillin 50000 to 1 lakh units per kg. of body weight
per day 4 hourly or 6 hourly in divided doses parenterally. Those patients who were sensitive to penicillin were given ampicillin or chloramphenicol. Gentamycin was added to the patients who had sepsis or aspiration pneumonia, otitis media or puerperal sepsis.

In some cases metronidazole was used along with above antibiotics.

Specific Therapy -

All patients were given intrathecal human immunoglobulins (SII, T.I.G.) 250 I.U. to 1000 I.U., in addition to other standard routine treatment.

Lumbar puncture was done under aseptic precautions, for administration of immunoglobulins. After escape of 8-10 drops of cerebro-spinal fluid, human immunoglobulin was slowly pushed intrathecally and the puncture site was sealed by tincture benzoin.

All the patients were also immunized by tetanus toxoid. 0.5 ml, intramuscularly on admission and which was repeated at interval of six weeks and six months.

General Nursing Care

All the cases were provided general nursing care with periodic changes of posture to prevent decubitus ulcer and pulmonary stasis. Care of back was done by
sponging and applying spirit and talcum powder. Bladder was catheterized and for bowel, soap water enema or glycerine suppositories were applied when needed.

Suction of naso and oropharynx was done when ever required, to keep the air way patient and free of secretions.