

Title: CLINICAL PROFILE OF CASES ON SUPRASCAPULAR INTRA DERMAL RABIES VACCINATION (IDRV) WITH TETANUS TOXOID (TT) OVER DELTOID

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Abstract Rabies prevention not only stands on the three pillars of local wound care, passive (RIG) & active immunization, but also requires appropriate anti tetanus measures. The concept of Tetanus Toxoid (TT) administration after animal bite is practiced without administration of TT vaccine status of the animal victims in majority of the cases. Intra Dermal Rabies Vaccination (IDRV), the cost effective method for active immunisation, is conducted at the public health institutions.

Original Article

CLINICAL PROFILE OF CASES ON SUPRASCAPULAR INTRA DERMAL RABIES VACCINATION (IDRV) WITH TETANUS TOXOID (TT) OVER DELTOID

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Introduction:

Rabies prevention not only stands on the three pillars of local wound care, passive (RIG) & active immunisation, but also requires appropriate anti tetanus measures¹. The concept of Tetanus Toxoid (TT) administration after animal bite is practiced by majority of health care providers. The administration of TT vaccine is practiced without consideration of the TT vaccine status of the animal bite victims in majority of the cases. Intra Dermal Rabies Vaccination (IDRV), the cost effective method for active immunisation, is conducted at the public health institutions. The preferred site for IDRV is over the two deltoid regions by the health care providers in Anti Rabies Clinics (ARC). Similarly, the TT vaccine is also administered over the deltoid region. Two vaccines can be administered simultaneously but at different sites². However in anti rabies treatment, it is possible that 2 vaccines (TT & IDRV) may be given at the same site if proper history of TT vaccination is not enquired from the animal bite victim.

The present study was therefore conducted with the following objectives:

- To study the clinical aspects of IDRV over suprascapular area

Materials & Methods:

- Place of study: Anti Rabies Clinic (ARC) of VSSMCH Burla, Odisha
- Period of study: From January 2015 to April 2015 (inclusion of study subjects) & follow up till September 2015.
- Study method: The cases attending Anti Rabies Clinic constituted the study population. The

cases were enquired regarding TT vaccination status. The cases who revealed that they have been given TT vaccine over deltoid area were included as the study subjects. These cases were administered IDRV over both supra scapular areas. The cases were given the contact telephone numbers of the investigators for any side effects following immunisation. Similarly, the contact telephone numbers of the cases or their relatives were noted for follow up & enquiry from the cases.

Table : I
Age and Sex distribution

Age(in yrs)	male	Female	Total (%)
0-5	16	9	25 (8.4)
5-15	39	19	58 (19.6)
15-45	98	39	137 (46.3)
45-60	32	16	48 (16.2)
>60	23	5	28 (9.5)
Total	208(70.3%)	88(29.7%)	296 (100)

Results & Discussion:

In the study out of 296 category III dog bite cases 208(70.3%) were males and 88(29.7%) were females.

In our study nearly half (46.3%) were in the age group of 15 - 45 years and children < 15 years were 28%. In other studies^{3,4} have found that more than half of the animal bite victims were in children < 10 years of age. A study done by Behera *et al.*⁵ showed prevalence of animal bite in Children from 0 to 14 years about 39%.

About 94% of cases had attended the Anti Rabies clinic within first week of bite where as only 27.4% of cases reported with in 24 hrs of bite and

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Table : II
Time interval from bite to treatment

Time interval	Number	Percentage (%)
0-24hr	81	27.4
2-7 days	198	66.8
8-15 days	12	4.1
16-30 days	2	0.7
>1 month	3	1.0

very few about 6% reported after one week which is similar to the findings of the study conducted by Behera et al⁵.

Bites involve the lower extremity in 66.5% of victims followed by upper extremity in 29.4% and over head, face & neck in 4.1% of patients.

Table : III
Site of animal bite

Site	Number	Percentage (%)
Upper extremity	87	29.4
Lower extremity	197	66.5
Head, Neck & Face	12	4.1

In the studies^{3,4,6,7,8} also found lower extremities as the most common site of bite.

In the study 193(65.2%) patients had received one dose of TT with primary wound care at Govt. Hospitals followed by 61(20.2%) at chemist shop

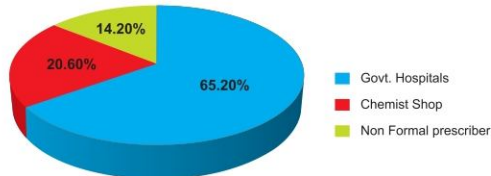


Fig 1: Place of Tetanus Toxoid and primary care received

and 42(14.2%) from non formal prescriber. The present study also revealed that TT vaccine had been also administered to the 25 (8.4%) of victims who were < 5 years. This implies lack of awareness

among health care providers regarding TT vaccination.

Conclusion:

IDRV is the cost effective method practiced at Government hospitals. The small dose but multisite administration of Rabies vaccine has been a proven method for active immunisation against Rabies. However, it is desired that immuno interference due to administration of two vaccines at the same site should not be done. The practice in all anti rabies clinics should be to take appropriate TT vaccination history from the animal bite victims. This will be helpful for deciding the areas for IDRV administration to the cases. If a case has come without TT vaccination, then TT may be given over deltoid but the site of IDRV over the same deltoid should be at least one inch (2.5cm) away^{2,9}.

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