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# 0% Mortality & 0% Renal Failure in Russell's viper Patients in Rural Set up

## Study of 93 cases of Russell's viper Patients


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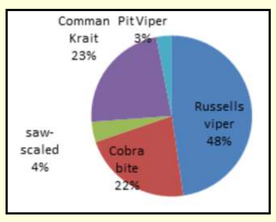
## Introduction:-

**Snake bite is common emergency in farmers and tribal in rural India. Viper bites are more critical and poisonous. Recently incidence of snake bite is increasing in Junnar and Ambegaon province. The incidence of Russell's viper bite is high among the big fours (48%).**

Percentage wise distribution



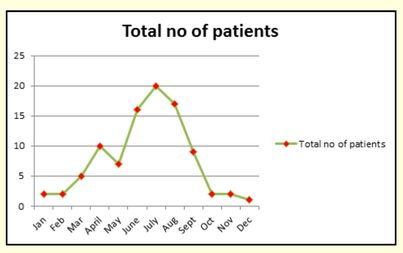

Total no. of viper bites patients-Incidence increasing every year.

| Years | R Viper Bite Patient | Saw Scaled Viper | Pit Viper |
|---|---|---|---|
| April2012- March 2013 | 20 | 1 | 1 |
| April2013-March 2014 | 23 | 2 | 2 |
| April 2014-March2015 | 28 | 4 | 1 |
| April 2015- Aug. 2015 | 22 | 1 | 2 |
| Total | 93 | 8 | 6 |

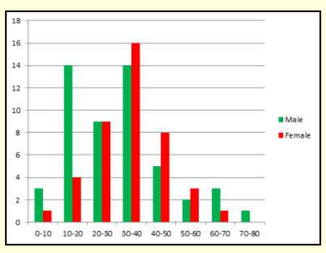
**Direct admission -** 56 patients.

**Referred Patients -** 37 patients.

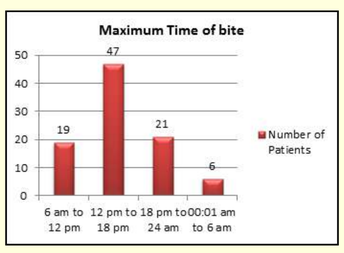
Monthly Distribution: - incidence peak in June, July, August also in April & Sept.




A study of 93(M-51, F-42) snakebite cases of 4 years (2012-2015)

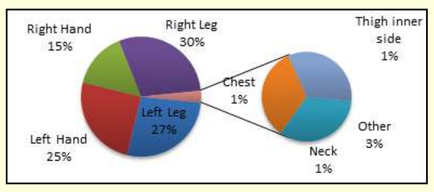



Age Group - Incidence is more in working age group 20 -50 yrs. Minimum age -3yrs, Maximum age -74yrs.




Time of bite – Incidence is more during day time while working in farm & also in evening time mainly while walking in farm or on road

Site of bite-Lt hand, Rt leg & lt leg gets more affected.




| Total number of patients | Neurotoxicity Ventilation Required NIV 6.4% | | Nephrotoxicity Dialysis Required 3.2% | |
|---|---|---|---|---|
| | Male | Female | Male | Female |
| 93 | 4 | 2 | 2 | 1 |

### Signs & Symptoms –

- Tender enlargement of lymph nodes.
- Nausea, vomiting, abdominal pain and abdominal tenderness which suggest a gastro-intestinal or retro-peritoneal bleed.
- Shock, hypotension resulting from hypovolemia or direct vasodilatory effects of venom fractions.
- Bilateral parotid enlargement ( viper head appearance ), conjunctival oedema and subconjunctival haemorrhage.
- The severity of the symptoms depends on the age and the size of the victim.
- Sheehan's syndrome.
- Neuro-myo-toxicity.
- Sys capillary Permeability syndrome.


1) Bite mark:-Bite mark is visible in 89 subjects


2) Swelling and tenderness


3) Blisters and Necrosis


Blisters and Necrosis

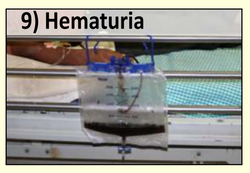

4) Severe necrosis (2) & skin grafting (1)


5) Ecchymosis


6) Active bleeding from site of bite- seen in 20 patients.


7) Subconjuctival haemorrhage


8) Bleeding Gums

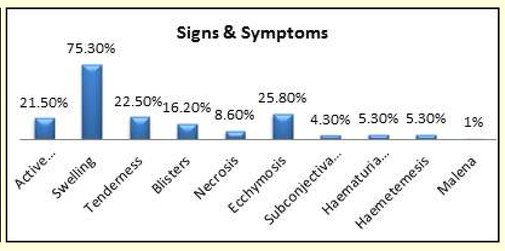

9) Hematuria

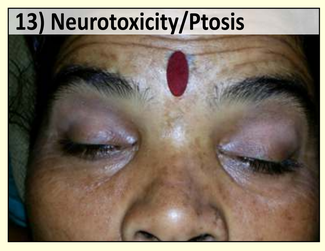

Hematuria


10) Oliguria / ARF


11) Tourniquet


12) Incision(6)





13) Neurotoxicity/Ptosis

## Case

### RENAL FAILURE TREATED WITH MEDICAL MANAGEMENT

**40 yrs female .H/o R V bite while cutting grass at 7.30 pm. Transferred from Pvt. hospital to our hospital 7 hrs after bite. H/O Vomiting, Melena, Abdominal pain, Anuria.O/E Pulse 100/m, BP-140/90mmof Hg, Ptosis, drowsy, Periorbital and facial oedema.**

**Local exam - Swelling increased up to thigh within 2 days**

**Investigations - Hb 7 gm%, on day 3 WBC count increased to 43200. On day 7 BUN increased upto 165, S.Cr. 7.1, Platelet count 32000.**

**Treatment - ASV, blood transfusion, platelet transfusion. Antibiotics, inj lasix. Fluid management, Dopamine drip. Aggressive fluid and shock management, blood and platelet transfusions, judicious use of antibiotics, Inj. Dopamine, Wound care. Inj. T.T.**

## INVESTIGATION:

**20 Whole Blood Clotting Test (20WBCT Minute) Reliable test of coagulation**

**Other Useful Tests:-**

- **Haemoglobin/ PCV/ Platelet Count/ PT/ Peripheral Smear**
- **Urine Tests for Proteinuria/ RBC/ Haemoglobinuria/ Myoglobinuria**
- **Biochemistry for Serum Creatinine/ Urea/ Potassium**
- **Oxygen Saturation/ PR/BP/ RR/ Postural Blood Pressure**
- **ECG/ X-Ray/ CT/ Ultrasound (The use of X-Ray and ultrasound are of unproven benefit, apart from identification of bleeding in Viperide bites)**
- **APTT/ FDP/ D-Dimer**

## TREATMENT PROTOCOL-

**S/S sytemic envenomation+ 20 min WBCT prolonged, start with 10 vials of ASV diluted in 100 ml NS.**

**We are not using prophylactic Premedications prior to infusion of ASVS.**

**Repeat dose in haemotoxic envenomation-**

**After the initial 10 vials of ASVS no additional ASVS is given for the next 6 hours as the liver is unable to replace the clotting factors in under 6 hoursRepeat 20 min WBCT at 6 hourly intervals until coagulation is restored.**

**In the majority of cases of haemotoxic bites a dose of 20-30 vials of ASVS suffices.**

## CONCLUSION:-

**Viper bites are more critical & poisonous, more difficult to treat & requires great deal of critical care.**

**Clinical manifestation is almost similar except a few regional variations. Few patients of Russell's viper envenoming showed signs of neurotoxicity. They are treated with non invasive ventilation & ptosis remained for more than 48 hrs even after giving full dose of ASVS.**

**Early administration of ASVS and aggressive shock management reduces mortality and prevents complications like renal failure.**

**Good knowledge of clinical presentation & Proper use of antibiotics helped to prevent complication like local necrosis, renal failure & if promptly treated fasciotomy, amputation is prevented.**

**Only one patient required skin grafting.**

**Due to Community awareness programs patients are reporting early & availability of effective treatment locally helped to increase in survival rate.**

**This has helped in achieving 0% mortality and 0% renal failure in last 4 years.**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