

2. Isometamidium chloride (Samorin, Trypamidium)

- Dissolve the contents of the 1 g sachet in 100 ml of sterile water or boiled water that has cooled.
- Administer the solution intravenous under supervision of veterinary personnel.
- If you do not know how to do this you can also use deep intramuscular injection at 0.5 mg/kg live body weight (equal to 1ml/20kg - See Isometamidium dosage table).

Live Weight (Kg)	Dosage in ml
100	5.0
150	7.5
200	10.0
250	12.5
300	15.0
350	17.5
400	20.0
450	22.5
500	25.0
550	27.5
600	30.0

Things to note

- Carry out weight estimate before administering drugs.
- Because camels migrate over long distances, infection with trypanosomes may take place in one location, but clinical signs may become visible in a different location.
- Treat sick camels as early as possible for high success rates.
- Hygienic injection practices by using new disposable needles to avoid contamination that can lead to abscesses.
- The drug may be used for prophylaxis (protection) against *T. evansi* infections (especially in pregnant females) and protects camels against *T. evansi* infections for 6 to 12 weeks.

Caution

- Do not exceed a total triquin dose of 18 ml in one camel.
- Most camel with Triquin resistant *T. evansi* infection when treated with Isometamidium do not respond to the treatment and may suffer from toxic effects.



HOW TO CONTROL TRYPANOSOMIASIS (SURRA) IN CAMELS



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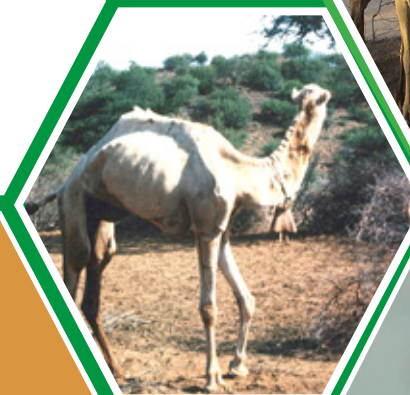
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A camel with typical symptoms of trypanosomiasis

Introduction

Camel trypanosomiasis, also known as surra is one of the most important cause of economic losses in camel rearing areas, causing disease in up to 30.0% and mortality of around 3.0%. The disease is endemic in camel rearing counties of Kenya. Surra is caused by a parasite known as *Trypanosoma (T.evansi)*. Camels can also be infected by *T. congolense* and *T. vivax* found in and near tsetse fly infested areas. Locally, the disease is called *Gandi* (Gabbra); *Dukan* (Somali); *Omar* (Rendille); *Saar* (Samburu) and *Ltorobwo, lokipi* (Turkana).

Mode of transmission

T. evansi is transmitted mechanically by blood sucking flies such as stomoxys, tabanids and camel fly (*Hippobosca camelina*) - a large shiny reddish coloured fly that sucks blood specifically from camels outside the tsetse belt. *T. congolense* and *T.vivax* are transmitted by tse-tse flies near and within the tsetse fly belts.



Biting flies (*Stomoxys*, tabanid, camel fly) responsible for mechanical transmission in camels

Symptoms

Most Common

- The chronic form caused by *T. evansi* is characterized by abortion soon after infection before camel appears sick.
- Sudden drop in milk production.
- Chronic weight loss progressing over a long period.
- Pale mucous membranes.
- Flow of tears from the eyes - camels appear “sleepy”.
- The sick camel lies down and rest while other camels are feeding.
- Dull coat with long hair at the tail coming off easily.
- Weak camels become prone to many other diseases such as pneumonia.
- Their urine has a characteristic smell.
- In majority of cases, death occurs after many months of illness.
- At post-mortem, camel often has a lot of water inside the abdomen.
- The acute haemorrhagic form (bleeding form) occurs only in and near tse-tse areas, caused by *T. congolense* and *T.vivax*. This causes death within a few days (esp. *T. vivax*).
- Dead camel shows internal bleeding and blood under the skin.

Less common: The acute central nervous form caused by *T. evansi*.

- Brain is affected, leading to dullness, blindness (typical sign!) and abnormal behaviours like making abnormal noises (crying) and running around like mad animal. Death occurs after few weeks.

Diseases that may resemble Surra

Severe forms: Rift Valley Fever (abortion), Haemorrhagic Septicaemia (Internal bleeding), Rabies (abnormal behaviour).

- **Persistent form:** Heavy worm infestation, internal abscesses, tuberculosis, malnutrition.

Prevention

- Inject triquin at least once a year in known tsetse fly belt areas
- Use insecticide repellants such as ectopar*

Treatment

1. **Quinapyramine-salt and pro-salt (Triquin®)** preparation is available in a vial containing 2.5 g pale yellow/whitish powder.
 - Dissolve the drug in 18ml of sterile water (provided) or boiled water that has cooled.
 - Administer the mixture through subcutaneous (under the skin) injection at a dose of 0.03ml per kg live body weight (see Triquin® dosage table below).



Camel Live Weight (Kg)	Dosage (ml)
100	3.0
150	4.5
200	6.00
250	7.5
300	9.0
350	10.5
400	12
450	13.5
500	15.0
600	18.00