

Haemonchosis in Sheep: The Silent Blood-Sucker of Monsoon Flocks

*R. Suresh¹ and K. Lakshmi²

¹Assistant Professor, Veterinary Clinical Complex, College of Veterinary Science, Korutla, PVNRTVU Telangana, India

²Professor, Department of Veterinary Clinical Complex, College of Veterinary Science, Rajendranagar, PVNRTVU, Telangana, India

*Corresponding Author's email: sureshrasamalla@gmail.com

Sheep rearing is an important livelihood activity for small and landless farmers in Telangana. Among the major parasitic diseases affecting sheep, haemonchosis caused by *Haemonchus contortus* is particularly important during the warm and humid monsoon season. This blood-feeding abomasal nematode causes blood loss, anaemia, hypoproteinaemia, weakness, reduced growth and submandibular oedema ("bottle jaw") and severe infections may result in mortality. The present article describes a clinical case of haemonchosis with bottle jaw recorded at the Veterinary Clinical Complex, College of Veterinary Science, Rajendranagar, Hyderabad, on 30 September 2026, including the clinical findings, haematological abnormalities, diagnosis, treatment and key preventive measures.

Case History

A 1.5-year-old female sheep weighing 20 kg was brought to the Veterinary Clinical Complex, Rajendranagar, on 30 September 2026. The owner reported:

- A swelling behind and below the jaw, noticed 4 days earlier
- Reduced feed intake (inappetence) for 4 days
- Discharge from both nostrils for 2 days
- Normal water intake, urination and dung

The sheep was fed pulse husk (chuni) and grass, and grazed with the flock. Importantly, it had never been vaccinated or dewormed.

Aetiology and Life Cycle

Haemonchus contortus lives in the abomasum, the true (fourth) stomach of sheep and goats. The adult female is 2–3 cm long and looks like a barber's pole: a red, blood-filled gut twisted around white ovaries. Each worm removes about 0.05 ml of blood a day, so 5,000 worms can take nearly 250 ml daily (Soulsby, 1982; Taylor *et al.*, 2016).

The life cycle is short and direct:

1. Each female lays 5,000–10,000 eggs a day, which pass out in the dung onto pasture (Emery *et al.*, 2016).
2. In warm, moist weather, infective larvae develop within 4–6 days and climb onto wet grass.
3. Grazing sheep swallow the larvae, which become adult blood-sucking worms in the stomach.
4. The new worms start laying eggs in about 3 weeks, and the cycle repeats.

Outbreaks therefore peak during and just after the monsoon, on wet, low-lying or overgrazed pastures, and in flocks that are not dewormed regularly (Besier *et al.*, 2016).

Clinical Examination

The sheep was dull and preferred to lie down rather than stand. Its body weight of 20 kg was low for its age. The findings were:

Parameter	Finding	Normal in sheep
Rectal temperature	104°F	102–103.5°F
Conjunctival mucous membrane	Pale	Pink
Buccal (mouth) mucous membrane	Pale	Pink
Capillary refill time	1–2 seconds	Under 2 seconds
Under the jaw	Soft, cold, painless, fluid-filled swelling	No swelling
Nostrils	Discharge from both sides	Clean

The swelling under the jaw is the classic **“bottle jaw”** (submandibular oedema; Fig. 1). It forms when the worms drain so much blood that blood protein falls and fluid leaks out of the vessels and collects under the jaw (Radostits *et al.*, 2007). Together with the pale membranes, it pointed strongly towards blood-sucking worms. The mild fever and nasal discharge suggested a secondary respiratory infection in an animal already weakened by blood loss.



Fig. 1. Haemonchosis in a 1.5-year-old ewe: soft, cold, painless, fluid-filled submandibular oedema (bottle jaw) with a dull and depressed appearance

Laboratory Investigation

Faecal examination: A fresh faecal sample examined by the floatation technique revealed a heavy load (+++) of strongyle-type eggs, consistent with *Haemonchus* infection.

Haematology: Blood was collected from the jugular vein in an EDTA vial for a complete blood count.

Parameter	Unit	This sheep	Normal range in sheep
Haemoglobin (Hb)	g/dl	3.4	9–15
Packed cell volume (PCV)	%	11	27–45
Total RBC count	$\times 10^6/\mu\text{l}$	3.2	9–15
Mean corpuscular volume (MCV)	fl	34.4	28–40
Mean corpuscular haemoglobin (MCH)	pg	10.6	8–12
MCH concentration (MCHC)	g/dl	30.9	31–34
Total leucocyte count (TLC)	$\times 10^3/\mu\text{l}$	13.8	4–12
Neutrophils	%	52	10–50
Lymphocytes	%	34	40–75
Monocytes	%	3	0–6
Eosinophils	%	11	0–10

Parameter	Unit	This sheep	Normal range in sheep
Basophils	%	0	0–3
Platelets	$\times 10^3/\mu\text{l}$	410	250–750

Values in bold are outside the normal range.

Interpretation: Haemoglobin, PCV and RBC count were all reduced to about one-third of the lower normal limit, confirming severe anaemia due to continuous blood loss into the abomasum (Weiss and Wardrop, 2010). The slightly low MCHC indicates early hypochromia, as iron reserves begin to run out with prolonged blood loss. Eosinophilia reflects the body's response to the parasites. Leucocytosis with neutrophilia and relative lymphopenia is consistent with the concurrent respiratory infection and stress.

Diagnosis

Based on the history, pale mucous membranes, bottle jaw, heavy egg count in dung (Fig. 2) and the CBC, the sheep was diagnosed with **haemonchosis with severe anaemia and bottle jaw** with a secondary respiratory infection.

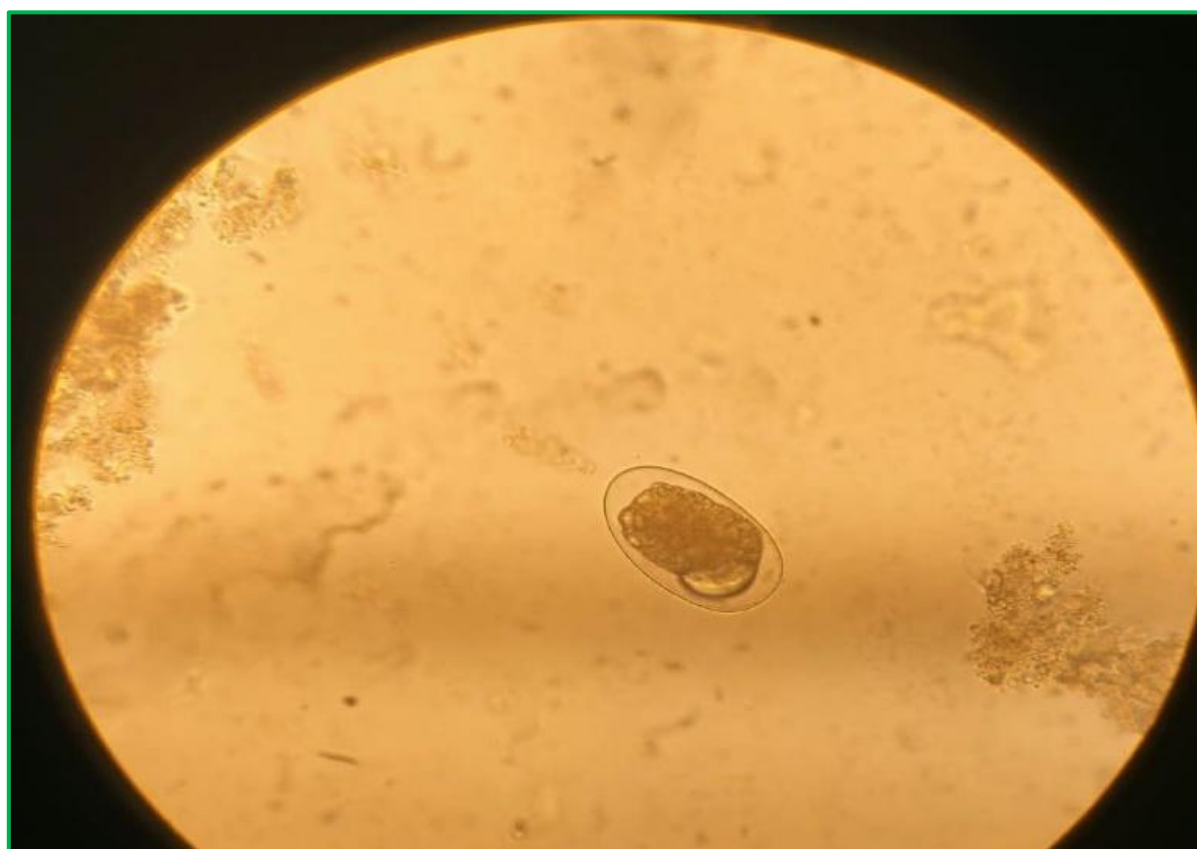


Figure 1. *Haemonchus contortus* egg detected in the faecal sample of a sheep by direct faecal smear microscopy, showing a characteristic oval, thin-shelled, morulated strongyle-type egg

Therapeutic Management

Therapy was aimed at eliminating the parasites, correcting the anaemia and controlling the secondary infection. The following prescription was given for the 20 kg ewe:

Rx

1. **Inj. Flizik** — 80 mg I/M
 - Sig: Inject intramuscularly, once daily for 3 days.
2. **Inj. Toxol** — 2 ml I/M
 - Sig: Inject intramuscularly, once daily for 3 days.
3. **Inj. Feritas** (iron preparation) — 1 ml I/M
 - Sig: Inject deep intramuscularly, single dose.
4. **Susp. Panacur** (fenbendazole) — 200 mg
 - Sig: Give orally, single dose. Repeat faecal examination after 14 days.

5. Syp. Haem-Up (haematinic) — 100 ml

- Sig: Give 10 ml orally, once daily for 10 days.

Note: Doses are calculated for this animal's body weight. Farmers should not use this prescription for other animals without consulting a veterinarian.

The ewe was handled gently throughout, as severely anaemic animals may collapse with stress or exertion. Animals with even lower PCV may require a whole blood transfusion.

Advice to the Owner

- Complete the full course of the haematinic syrup and keep the sheep in a shed, away from wet pasture, until it regains strength.
- Provide good green fodder, a little concentrate, mineral mixture and clean water.
- Bring a fresh dung sample after 10–14 days to check whether the dewormer worked.
- Get the rest of the flock examined and dewormed, since the other sheep grazed the same pasture.
- Start regular deworming and vaccination as per the veterinarian's schedule.

Clinical Significance of the Case

- **No deworming, heavy worms:** the sheep had never been dewormed, so worms built up month after month until the animal broke down.
- **Monsoon timing:** the case came at the end of September, the peak season for this worm on wet pastures.
- **Late detection:** by the time the jaw swelled, the RBC count had fallen to a third of normal. Pale eyes would have shown the problem weeks earlier.
- **One weak sheep, many at risk:** a sick sheep spreads thousands of eggs a day on the shared pasture, putting the whole flock in danger.
- **Weak animals catch other infections:** the fever and nasal discharge show how anaemia lowers resistance to other diseases.

Prevention and Control

The sheep in our case had never been dewormed, which is exactly how such severe cases arise. A simple plan can protect the whole flock:

1. **Strategic deworming:** deworm the flock before the onset of the monsoon (May–June), during the rains (August–September) and at the end of the rains (October–November), as advised by the local veterinarian. Deworm ewes before lambing and lambs from about 2–3 months of age.
2. **Treat the ones who need it:** check the inner eyelid of every sheep every 2–3 weeks in the rainy season (FAMACHA system; Van Wyk and Bath, 2002) and treat the pale ones promptly. This saves money and slows dewormer resistance.
3. **Rotate dewormer groups yearly, not every dose,** and get a faecal test 10–14 days after deworming to check whether the drug actually worked (Kaplan, 2004; Kaplan and Vidyashankar, 2012).
4. **Rotational grazing:** divide grazing land and move the flock every few days, so larvae on rested plots die off. Avoid low-lying, waterlogged areas.
5. **Graze after the dew dries:** larvae are most numerous on wet grass in the early morning; let the sheep out after mid-morning when possible.
6. **Avoid overcrowding and overgrazing:** sheep grazing grass very close to the ground swallow more larvae.
7. **Good feeding:** well-fed sheep with adequate protein and minerals resist and recover from worm infection far better.
8. **Quarantine new animals:** deworm and hold newly purchased sheep separately for 2–3 weeks before mixing them with the flock.
9. **Clean housing:** remove dung regularly and keep sheds dry and well ventilated.

Conclusion

This case of a 20 kg ewe with bottle jaw and an RBC count of just $3.2 \times 10^6/\mu\text{l}$ shows how silently and severely the barber's pole worm can drain a sheep. The disease was entirely preventable with timely deworming. Checking the eyes regularly, deworming at the right time with the right dose, rotating pastures and feeding well can keep this worm under control. When a sheep looks pale or develops a swollen jaw, take it and a dung sample to the nearest veterinary hospital without delay. Early treatment saves both the sheep and the farmer's income.

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