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**STUDIES ON SOME CLAW ABNORMALITIES  
AND OVERGROWTHS IN SHEEP IN BEHIRA PROVINCE**  
(With 1 Table & 10 Figs.)

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دراسات علي بعض الشدودات والنمو المفرط في  
الأظلاف في الأغنام في محافظة البحيرة

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شملت هذه الدراسة أهم الشدودات والنمو الزائد في أظلاف الأغنام وكذلك معالجة  
هذه الشدودات جراحيا باستخدام قاطع الظلف وقد وجد أن أهم الشدودات هي : الافراط في  
النمو مع الإتجاه للخارج الظلف المقصي ، الظلف المجعد - الافراط في النمو مع الافراط  
الزائد في إنقلاب السلاميات الي الأمام والي أعلي والظلف الحلزوني والأظلاف الراكبة علي  
بعضها ، الظلف شبه السوط ، الظلف المنحني علي شكل نصف دائرة والظلف المشطور - الافراط  
مع عدم تساوي التآكل .

### SUMMARY

Sheep are source of meat and milk production in Egypt, as well as of wool production in some arabian countries. The claw abnormalities and overgrowths in sheep in Behira Governorate are studied. These abnormalities include, Scissors claws, elongation with toeing out of the medial claw, wrinkled claw, advanced elongation with hyperextension of hind phalangeal articulations, Advanced elongation with unequal wear and tear, overlapping claws corkscrew claws, whiplike claw, biforcated claws these abnormalities are all treated surgically.

### INTRODUCTION

Sheep are source of meat and milk production in Egypt, as well as of wool production in some arabian countries. Claws of sheep need constant attention if they grow and persist in a proper balance and shape.

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Claw abnormalities and deformities met with in cattle are, overgrown claw, scissor claw, hyperplasia (GREENOUGH, et al. 1972 and KHAMIS, et al. 1984). Other abnormalities are described by (BOUCKAERT, et al. 1958; KARL, et al. 1980 and GREENOUGH, 1982) as posthorklaven, pantofillklave, break claw and corkscrew claw. In addition to these abnormalities there were also problems of interdigital hypoplasia and toeing out of the claw in freisian cattle in Egypt (ALI, 1983).

In small ruminants, the main problems of the claw met with are sole syndrome, foot dermatitis, interdigital ulcerative dermatitis, foot rot, sole ulcer with septic arthritis of the cornopedal joint and inflammation and suppuration of the biflex canal. The soft syndrome was seen in all affected cases alone or with other foot disease. The foot dermatitis may be regular or irregular in the form of beak, corkscrew and scissors foot. These affections result in lameness in sheep, (VIENNA, 1968; HOOPER, et al. 1972; FRANK, 1981; O'CONNOR, 1982 and SOLIMAN, et al. 1984).

The aim of this work is to throw a light on the different abnormalities, and overgrowths of the claws in sheep as well as trials for their treatment.

### **MATERIAL and METHODS**

In the present work sheep of different breeds (native breeds as Rahmany, Barky, Oesimi and Balady and foreign breeds as Marino and Finlandi) in Behira Governorate farms and sporadic groups owned by farmers were found suffering from claw problems.

Claw abnormalities were registered in 12 rams and 1688 ewes collected from farms.

10 types of abnormalities were recorded, some were in the 2 claws of the thoracic limb, other in the 2 claws of the pelvic limb and others in the four claws of both thoracic and pelvic limbs and some abnormalities were present in only one limb. All these abnormalities were corrected by shortening with claw cutter.

### **RESULTS**

Ten types of claw elongations and abnormalities in sheep were recorded and described in the present study. These abnormalities showed in Table (1).

- 1 - Elongation with toeing out of the medial claw was prevalent in Barkey sheep this abnormality may be in one or more than one claw. In this case the interdigital space may be obliterated if the medial claw is affected and wide if the lateral is affected Fig. (1).

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- 2 - Scissors claw which is prevalent in Marino sheep affecting mainly the claw of the thoracic limb. The lateral claw is seen to be crossing the medial one or vice versa Fig. (2).
- 3 - Wrinkled claws where the claws appear corrugated it is noted in aged sheep as a result of inadequate function of periople Fig. (3).
- 4 - Advanced elongated claw with more hyperextension of the hind phalangeal articulations Fig. (4).
- 5 - Advanced elongation with unequal wear and tear Fig. (5).
- 6 - Overlapping claws in which 2 claws are superimposed over each other with slight medial elevation. The condition is noticed in the right pelvic limb of marino ewe and the right pelvic limb in Barky Fig. (6).
- 7 - Corkscrew claws, this type was observed in many cases where the claw is twisted one or more than one time as shown in Fig. (7).
- 8 - Curved out half circle axial deviation Fig. (8).
- 9 - Whip like claw which is prevalent in governmental farms where the attendants neglected the animals. This form is an advanced type of corkscrew Fig. (9).
- 10- Bifurcated claw which appear either in the lateral or medial claw usually prevalent in pelvic limb Fig. (10).

### DISCUSSION

In the present study trimming of the claws in sheep and goats was performed under the effect of xylazine Hcl in a dose of 0.2 mg/kg b.w. This is in agreement with that advised by (SILBERSIEPE BERGE and MULLER, 1965; GREENOUGH, et al. 1972 and GREENOUGH, 1980).

High percentage of abnormalities of the claw were present in Barkey and marino sheep owing to the fact that these species are predominating in governmental farms, where they are stabled indoors for a long time and are neglected to be trimmed periodically. On the other hand Rahmany, Barkey and Oesimi breeds are belonging to farmers and are bread in open yards where they are allowed to go daily for grazing hence the elongation and abnormalities are rarely found in these species.

Wrinkled claws are present in this work in both fore and hind feet. The affected sheep were gathered from Abbas farm where there is intermittent Moisture and dryness, this is in agreement with that of (GREENOUGH, 1982). While ALI (1982) stated that this abnormality is present only in the hind feet where the horn is weaker than that of the fore feet.

In addition the hind feet are subjected to moisture from the faces and urine. Females presented more claw abnormalities than males specially in their hind limbs because of pregnancy which puts more weight on the hind limbs. In addition after parturition the swollen udder adds more weight to the hind limbs. The same was mentioned by ALI (1983), who stated that higher incidence of claw abnormalities in the hind limbs were observed in freisian cattle due to their heavy body weight. The abnormalities and overgrown claws are prevalent in females than in males in the present work, a result which coincide with that of GREENOCRUGH, et al. (1972).

In the present work 10 types of claw abnormalities and elongation were recorded in sheep which are (1) Scissors claws (2) elongation with toeing out of the medial claw (3) wrinkled claws where the claws appear corrugated (4) advanced elongated claw with more hyperextension of the hind phalangeal articulation (5). Advanced elongation with unequal wear and tear (6) over-lapping claws in which 2 claws are superimposed over each other with slight medial elevation (7) cork screw claws (8) curved out half circle axial deviation (9) whip like claw (10) bifurcated claw.

KHAMIS, et al. (1984) recorded 3 types of abnormalities in cattle namely, hypoplasia, overgrown claws and scissors claws, while O'CONNOR (1982) mentioned that claw deformities in ruminants are long claws, turning out, turning in and overlapping ones, on the other hand GREENOUGH, et al. (1972), GREENOUGH (1982) and ALI, (1983), described the following abnormalities in large ruminants, corkscrew, scissor, overgrown claws, curved claws, interdigital hypoplasia, claw hypoplasia, wrinkled claw, beak claw, toeing out and lastly bent medial claw, while SOLIMAN, et al. (1984) described 3 types of abnormalities of claws in sheep namely beak claw, corkscrew and scissors claw.

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## LEGENDS

- Fig. (1):** Showing forward elongation of the claws of both fore limbs with fracture of the cranial horny part of the lateral claw of the right thoracic limb and toeing out of the medial claw of the same limb (3 years old marino ewe).
- Fig. (2):** Showing scissors claws of left pelvic limb in a 4 years old marrino ewe.
- Fig. (3):** Showing bilateral sinkled claw of left thoracic limb in a 4 years old Barky ewe.
- Fig. (4):** Showing the posture of the hind limbs in cases of elongation of the claws dorsal flexion.
- Fig. (5):** Showing advanced elongation with unequal tear and wear right pelvic limb in a 4 years old oesim ram.
- Fig. (6):** Bilateral overlapping 2 claws of right pelvic limb in a 3 years old marino ewe.
- Fig. (7):** Showing cork-screw claws of left pelvic limb in a 3 years old Rahmani ewe.
- Fig. (8):** Curved out lateral claw of right throacic limb in a 3 years Barky ram.
- Fig. (9):** Whip like medial claw. The lateral claw is hypoplastic in a 5 years old Barky ewe.
- Fig. (10):** Biforcated medial claw left hind limb in a 4 years old Barkey ewe.

Table (1)  
Forms of elongations and abnormalities of sheep claws

Breed		Forms	Thoracic	Pelvic	Uni	Bil
Male	Female					
		Elongation	2	-	-	4
		Elongation with toeing out	1	-	-	-
	Barky	Wrinkled claw	-	1	-	2
	Barky	Overlapping straight	-	1	-	2
	Barky	Whip like + hypop lastic	-	1	-	2
	Barky	Biforcated curved	-	1	1	-
Barky	Barky	Toeing in curved out	-	1	1	-
	Marrino	Scissors claw	1	1	1	-
	Marrino	Overlapping curved claw.	-	1	-	2
	Rahmany	Cork screw claw	-	1	-	2
	Oesimi Barky	Biforcated straight claw	-	1	-	2
			4	8	5	16

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