The superficial inguinal lymph node of the pig and PCV2

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Introduction

Enlargement of the superficial inguinal lymph node is used as a classic indicator of PMWS (Postweaning Multisystemic Wasting Syndrome) in the pig[1]. However, the normal characteristics of the superficial inguinal lymph node have not been described. Australia was selected as the source area as all pigs are free of the major swine viral pathogens which may result in lymphoid enlargement – PRRSv, SIV and TGE/PED, CSF and ASF for example[2]. PCV2 has been described in Austrlia[3]. PMWS has not been seen in Australia.

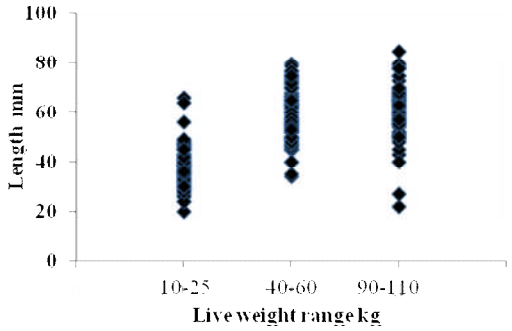
Materials and methods

300 superficial inguinal lymph nodes were obtained from for the weight ranges of 40-60 kg and 90-110 kg from a Western Australian slaughterhouse. 107 of 10-25 kg pigs was obtained at the termination of a feeding research study. No pig demonstrated gross pathological changes. The pigs were all commerical pigs.

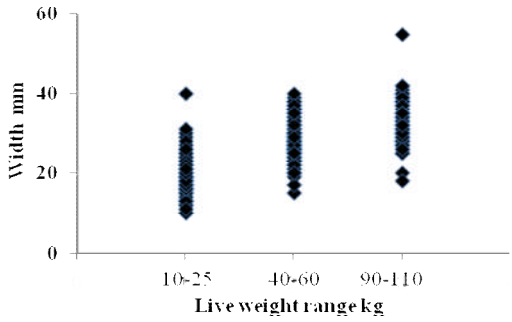
The lymph nodes were dissected from the 'flare fat' and examined for morphology, size, weight and histology.

Results

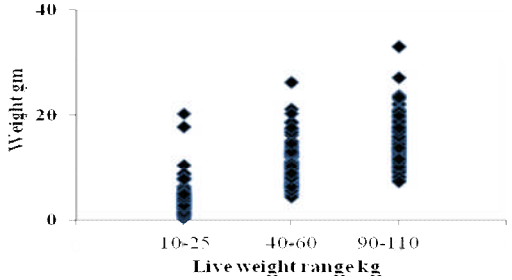
Length (mm) range by liveweight group (kg)



Width (mm) range by liveweight group (kg)



Weight (gm) range by liveweight group (kg)



Stastistical analysis

	Liveweight of the pig		
	10-25 kg	**40-60 kg**	**90-110 kg**
Shape/appearance			
Reniform	50 %	40 %	41%
Lobulated	40 %	38 %	48%
2 distinct nodes	10 %	9 %	11%
Length mm			
Range	20-66	34-80	22-85
Mean	38	59	61
SD	7.4	9.3	9.3
Width mm			
Range	10-40	15-40	18-55
Mean	19	28	33
SD	4.5	4.7	5.0
Weight gm			
Range	0.5-20	4-26	7-33
Mean	4.2	10.7	14.9
SD	2.8	4.3	4.2
Histology			
Haemorrhagic	0/107	13/170	9/130
Oedema	0/107	0/170	2/130
IHC PCV2 +ve	0/107	8/96	1/106

The IHC score for PCV2 was below 1[4] in all 9 +ve cases

Comparison of the normal lymph node with those with a PCV2 positive in the 40-60 kg liveweight range (8/96)

Length average 49 mm, range 43-55 mm, p = 0.01
Width average 26 mm, range 23-29 mm, p = 0.3
Weight average 7.6 gm, range 4.5-9.1 gm, p = 0.05

The single PCV2 positive in the 90-110 kg range (1/106)

Length 66 mm, Width 35 mm and weight 17.7 gm.

Discussion

At routine postmortem examination the size of the superficial inguinal lymph node is difficult to appreciate as it is embedded in fat. In cases of cachexia the fat is reduced revealing a prominent lymph node, which may then be mistaken for being enlarged. Reports of enlargement of the superficial inguinal lymph node are common in descriptions of the lesions of PMWS[1]. To record enlargement. the clinician must report the actual size of the lymph node not just a perception.

In this study, the presence of PCV2 was detected by IHC in 9/309 wean to finish lymph nodes (10-110 kg pigs) with a peak of 8/96 in growers (40-60kg pigs). The lymph nodes associated with a positive PCV2 IHC were actually smaller than the general population in terms of length and weight.

References

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2. Pathology of the Pig. A diagnostic guide. ISBN 0-7-306-6537-2
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