

EFFICACY OF A SINGLE OXYTETRACYCLINE LONG ACTING  
TREATMENT AGAINST MMA IN SOWS

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Abstract

As stress and infection can cause MMA syndrome in sow for any type of management. Long acting antibiotics, Terramycin<sup>(R)</sup>/LA, was used as the mean to prevent such problem. Treatment with divided dose injected into 2 sites and was initiated at farrowing or as soon as possible post farrowing. The findings indicated incidence of MMA syndrome was 10.8% in the control animals which was significantly higher ( $P < 0.05$ ) than those in treated animals. Litter performance was similar for all traits studied but only weaning weight in the treated group was higher than the untreated control ( $P < 0.05$ ). This findings also indicated that MMA syndrome can be occurred in the normal parturition.

### Introduction

The problem of metritis, mastitis and agalactia (MMA syndrome) in post farrowing sow is commonly encountered in every type of management. Although definite cause has never been established but generally accepted that there are many causes such as endocrine disorder, management failure and infections. Affected sow tends to increase piglet mortality and if the sow does not receive proper treatment she is always culled and the rest of the piglets are fostered. The present investigation was to evaluate the prophylactic efficacy of oxytetracycline (OTC) long acting when given to sows prior to or within 24 hours of farrowing for preventing MMA syndrome. As it was proved that this product offered long acting and efficaced up to 3-4 days after treatment (Cornwell, 1980).

### Material and method

**Animals:** Seventy nine of two crossbred (LY) out of 280 sows from Vesprathom farm, Nakhon Pathom were used. They were raised under the same management condition during the period studied. The sows were hand mated twice when they were in heat using Duroc boar as a terminal to produce 3 crossbred fattening.

**Product:** Oxytetracycline long acting (OTC/LA - Terramycin<sup>(R)</sup> /LA) contains 200 mg Oxytetracycline per ml. Lot number 0-038-1 and generously supplied by Pfizer International Corporation, Thailand.

The sows and young pigs up to weaning were fed with commercial feed.

**Method:** Forty two sows pregnant days 113, 114 or when the milk flows while milking or immediately after farrowing were randomized intramuscularly injected 2 sites with OTC /LA, 10 ml at each site, and served as treated group (T 2). Whereas other 37 sows farrowing during the same period were left farrowing as usual and served as controls (T1). The incidence of MMA syndrome was monitored during the first

week post farrowing and prompt measure was taken immediately after the onset of the clinical signs was noticed.

Litter performance from birth to weaning was investigated. Details of the traits studied were average pigs born alive, average birth weight (kg), average live pigs at day 7 and average weight gain, number of weaning, weaning weight. Pig gain was also evaluated, They were computed and compared between the two groups studied. Difference of the mean was compared using paired t's test (Snedecor and Colchran, 1980)

Summary of the design of the investigation was shown below.

Treatments	Route of administration	Days Med.	No. of sows
T 1 Untreated control	--	--	37
T 2 Terramycin/LA 20 ml/sow	IM	1*	42

\*Treatment with divided dose injected into two sites and to be initiated within 24 hours before farrowing or immediately after farrowing.

### Result

Table 1 : Summary of incidence of MMA syndrome

Treatments	Incidence of MMA						
	No. of sows	Metritis		Mastitis		Agalactia	
		No.	%	No.	%	No.	%
T 1 Untreated control	37	4	10.8 <sup>a</sup>	4	10.8 <sup>a</sup>	4	10.8 <sup>a</sup>
T 2 Terramycin/LA 20 ml/sow	42	0 <sup>b</sup>	0 <sup>b</sup>	0 <sup>b</sup>	0 <sup>b</sup>	0 <sup>b</sup>	

<sup>a</sup> and <sup>b</sup> are significantly different (P < 0.05)

Details of the litter performance was shown in table 2

Table 2 : Summary of litter performance

	T1	T2
Number of sows	37	42
Average pigs born alive	9.1 ± 2.7 <sup>a</sup>	9.6 ± 2.4 <sup>a</sup>
Average birth weight, kg	1.3 ± 0.2 <sup>a</sup>	1.3 ± 0.2 <sup>a</sup>
Average live pigs, 7 days	8.5 ± 2.6 <sup>a</sup>	9.0 ± 2.4 <sup>a</sup>
Average 0-7-day weight gain, kg	1.10 <sup>a</sup>	1.00 <sup>a</sup>
Weaning	8.2 ± 2.6 <sup>a</sup>	8.7 ± 2.4 <sup>a</sup>
Weaning weight, kg	4.6 ± 0.9 <sup>b</sup>	4.9 ± 0.7 <sup>c</sup>
Pig survival 8-24 days (%)	97.3 <sup>a</sup>	96.8 <sup>a</sup>
Average 8-24-day weight gain, kg	2.2	2.6

For each trait of the groups studied :

a Non-significantly different ( $P > 0.05$ )

b,c Significantly different ( $P < 0.05$ )

### Discussion

As shown in Table 1, the incidence of MMA syndrome in sows was encountered only in untreated control, contrary to what was observed in sows treated with OTC /LA prior to farrowing, the difference between the two groups studied was significant ( $P < 0.05$ ).

Weaning weight in OTC /LA treated groups was significantly higher ( $P < 0.01$ ) than those in the untreated control.

Problem of piglet scour was minimized due to the fact that sows and piglets were fed with medicated feed from a commercial feedmill and management was also improved. Furthermore, in each group sows were distributed equally from parity 1 to 9.

### Acknowledgement

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