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1. Outline

Tilmicosin (Micotil, Elanco) has been used sporadically in conjunction with intramammary dry cow antibiotics in dairy practice since a report demonstrated an 85% success rate in curing chronic Staph. aureus infections (Biggs 1998*)

From August 2006 Micotil became limited to vet use only. This presented an opportunity to capture cow identities and milk recording data for treated cows and to assess field use of the product for cows presented by farmers for enhanced dry cow therapy.

A retrospective analysis of 102 cows from six dairy farms in one practice was performed. Each cow had been treated with Tilmicosin (Micotil, Elanco) at, or shortly after, dry off and had individual identity and monthly somatic cell count data available.

No milk bacteriology was available and significant assumptions were made regarding infection status through interpretation of composite individual cow somatic cell counts. It is recognised that these are limitations to this analysis. However, somatic cell counts are increasingly used to define infection status and the information arising from this investigation will be of interest to all those involved in recommending actions for individual cows assumed to be infected at dry-off.

2. Method

Milk recording data was examined for each individual cow treated which had both individual identity and treatment date recorded. Infection definitions were made using the following criteria:

If recorded cell count was above 200,000 cells per ml at the last milk recording prior to dry off, cows were defined as infected. The duration of that infection was the number of months since the cow had two consecutive milk recordings with a cell count below 200,000 cells per ml.

Cows were defined as cured if the first two consecutive recordings of the following lactation were below 200,000 OR if the first recording was above 200,000 and the two subsequent recordings were below 200,000.



Tilmicosin is a macrolide antibiotic marketed in the UK as Micotil (Elanco). Since August 2006 Micotil has been for vet use only, due to an association with fatalities in humans. Dose rates of around 10mg/Kg were used for cows in this survey.

Micotil has recently acquired a 36 day milk withdrawal.

3. Results

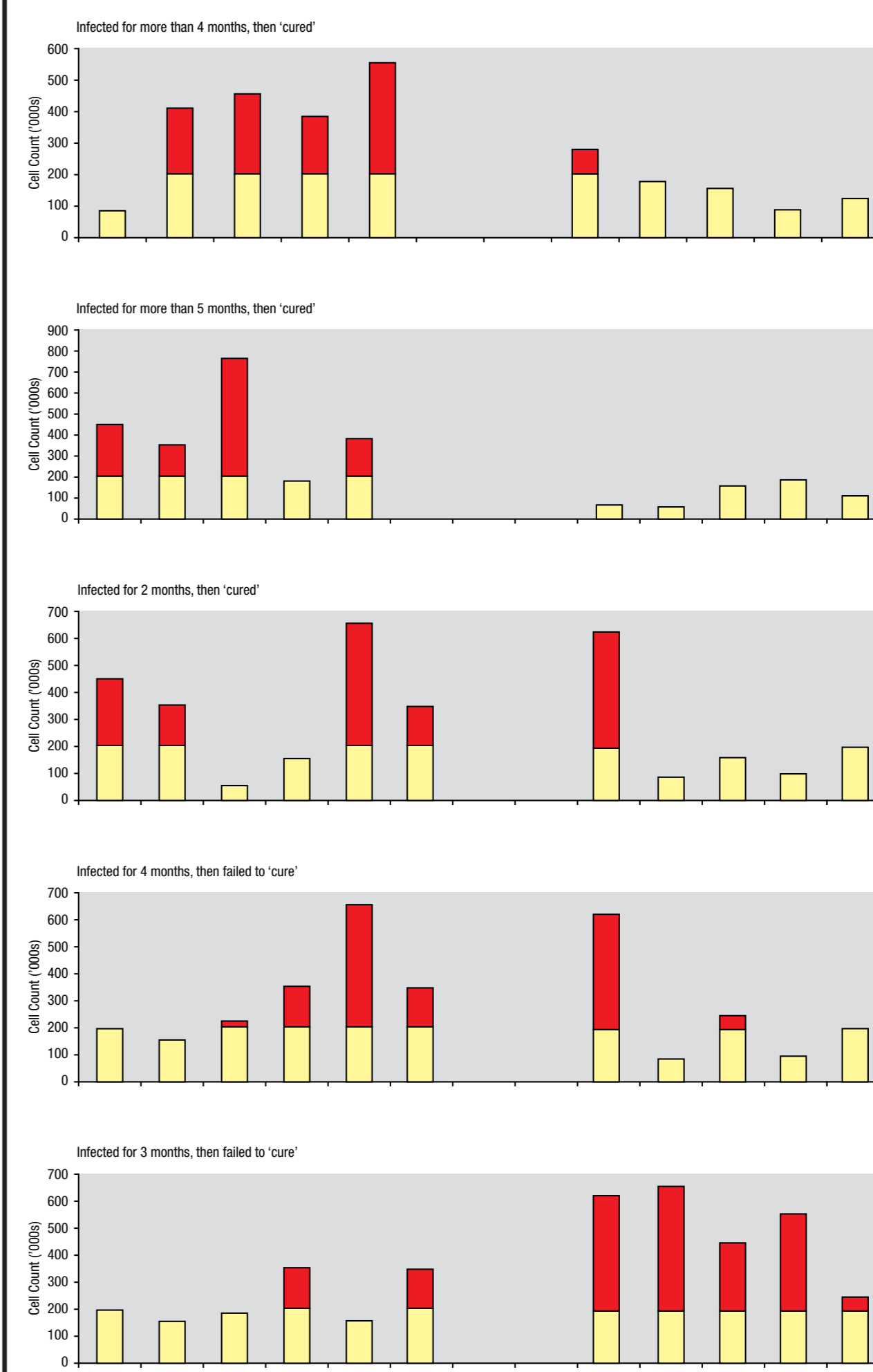
	Number of cows treated	Number infected at dry off	Number of cures	% cured of treated	% cured that were infected at dry off
Farm A	36	33	18	50.0%	54.5%
Farm B	22	19	19	86.4%	100.0%
Farm C	22	18	12	54.5%	66.7%
Farm D	5	5	4	80.0%	80.0%
Farm E	1	1	0	0.0%	0.0%
Farm F	16	13	12	75.0%	92.3%
All farms	102	89	63	61.8%	70.8%

Cure rate by parity	
1	62.5%
2	57.9%
3	68.8%
4	80.0%
5	58.3%
>5	61.5%

Cure rate by duration of infection	
1	61.1%
2	84.2%
3	62.5%
4	50.0%
5	50.0%
>5	61.5%



Example somatic cell count profiles



4. Conclusion

No bacteriological data was available in this retrospective analysis and significant assumptions have been made regarding infection status. However, manipulation of individual cow composite cell counts is a critical component of managing bulk somatic cell counts on farm. This analysis demonstrates that use of Tilmicosin at, or around dry off, may have a significant impact on subsequent cell counts in lactation. In this very small group of cows it appears that neither the age of the cow nor the duration of assumed infection, significantly affected the outcome of therapy. Further controlled prospective studies are recommended.

*(1) Biggs, A.M. (1998). Treatment of persistent Staphylococcus aureus infected cows at drying off with Tilmicosin (Micotil Elanco). Proceedings of the British Mastitis Conference, Axient/Institute for Animal Health/Milk Development Council/Novartis Animal Health. 1998, 89-90.