

Can transillumination improve the detection of deep pectoral myopathy in turkey carcasses when compared with postmortem inspection alone?

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BOTTOM LINE

- There is currently no peer-reviewed evidence exploring whether transillumination followed by postmortem inspection results in more accurate detection of deep pectoral myopathy in turkey carcasses than postmortem inspection alone.

Clinical scenario

You work as an official veterinarian in a small turkey abattoir. The plant inspection assistants would like to begin using a light source to transilluminate turkey carcasses to improve the detection of deep pectoral myopathy (also known as Oregon disease). This methodology would be used in conjunction with the legally required postmortem inspection.

The plant inspection assistants would like to adopt this approach because it is mentioned in the relevant rejection cards provided within the Manual for Official Controls published by the UK Food Standards Agency. They ask for your opinion as you will ultimately be responsible for the postmortem inspections. You wonder whether there is any evidence that the addition of a light source would result in more accurate disease screening than postmortem examination alone.

The question

In [turkeys at risk of deep pectoral myopathy], does [shining a light through the carcass followed by postmortem inspection compared with postmortem inspection alone] result in [more accurate disease screening]?

Search parameters

The search strategy can be viewed at <https://bestbetsforvets.org/bet/588>, and is also available as a supplement to this article on *Vet Record*'s website at <https://bvajournals.onlinelibrary.wiley.com/toc/20427670/2023/192/12>



Search outcome

- Three hundred and forty-five papers were found in the Medline search.
- All 345 papers were excluded because they did not answer the question.
- No relevant papers were obtained.
- Five hundred and forty-nine papers were found in the CAB Abstracts search.
- All 549 papers were excluded because they did not answer the question.
- No relevant papers were obtained.
- Overall, no relevant papers were identified using this search strategy.

Search last performed: 14 May 2023

Comments

None of the articles returned by the literature search directly answered the question posed in this evidence evaluation. This highlights the need for research directly comparing these diagnostic

methods to determine whether additional exposure to light improves disease screening accuracy. In the absence of peer-reviewed evidence, other information sources, such as government reports, could be used when deciding which diagnostic screening approach would be the most effective.

However, there needs to be an appreciation of the costs and benefits associated with integrating any new processes during the meat inspection process. As the prevalence of deep pectoral myopathy in turkeys is reportedly low and using transillumination may be more time consuming than postmortem examination alone, this approach may potentially be more suited to low- to medium-throughput abattoirs.

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The 'Evaluating The Evidence' section of *Vet Record* aims to answer specific clinical questions using a systematic approach to identify and succinctly summarise the relevant evidence from the scientific literature. The shortcomings of this evidence are also taken into account, thereby enabling vets to incorporate the best available evidence from the literature when making clinical decisions. Please contact us at vet.research@bvajournals.com if you have an article you would like us to consider for publication in this section.