PREVALENCE OF MUSCULOSKELETAL ABNORMALITIES AS AN INCIDENTAL FINDING IN RABBITS UNDERGOING COMPUTED TOMOGRAPHY

Potential risk factors in a three-year retrospective study of 117 rabbits

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40.2%

OF RABBITS HAD MUSCULOSKELETAL ABNORMALITIES (MA) IDENTIFIED ON COMPUTED TOMOGRAPHY (CT)

47 / 117

rabbits were MA-positive

WHY THIS MATTERS

Rabbits can mask pain and are often observed for relatively short periods. Subtle changes in gait, posture and activity may therefore go unnoticed. Existing evidence suggests osteoarthritis may be common but under-diagnosed, potentially delaying analgesia and therapeutic support.

AIM Determine the prevalence of incidental spinal and appendicular MA on CT and assess potential risk factors.

METHODS

- **117 rabbits admitted for CT**
- **Single veterinary hospital**
- **Three-year retrospective review**
- **Signalment, clinical notes and CT findings reviewed**

CLINICAL RELEVANCE

24.8% Of rabbits with no recorded MSK history still displayed MA on CT.

For veterinary nursing teams, the findings reinforce the value of:

- careful mobility and posture observation
- age-aware pain assessment
- escalation of subtle behavioural change
- support for multimodal treatment and rehabilitation

Earlier recognition may improve comfort, clinical support and rabbit welfare.

RESULTS AT A GLANCE

117 RABBITS

47 MA-POSITIVE

SEX DISTRIBUTION

59 FEMALE | **58 MALE**

MEDIAN AGE

6 years — MA POSITIVE

3.5 years — NO MA

Rabbits with MA were significantly older than rabbits without MA.

WHERE WAS MA FOUND?



SPINE
57.4%
27 / 47

ELBOW
53.2%
25 / 47

The spine and elbow were the most commonly affected sites among MA-positive rabbits.

HISTORY & ASSOCIATION

A recorded history of musculoskeletal disease was strongly associated with CT-detected MA.

INTERPRETATION

Imaging abnormalities do not necessarily define clinical severity. However, incidental MA and findings in rabbits without known MSK history indicate that disease may be substantially under-recognised

Musculoskeletal disease may be more common than clinical history suggests.

CONCLUSION

COMMON **MA was identified in 40.2% of rabbits undergoing CT.**

AGE **MA-positive rabbits had a higher median age.**

HIDDEN **Abnormalities occurred without recorded MSK history.**

WELFARE **Earlier recognition may improve clinical support.**

Incidental CT findings suggest rabbit musculoskeletal disease may be considerably under-diagnosed.

REFERENCES

1. Arzi B, Wisner ER, Huey DJ, Kass PH, Hu J, Athanasiou KA. (2012). A proposed model of naturally occurring osteoarthritis in the domestic rabbit. Lab Animal, 41(1), 20–25. doi:10.1038/laban0112-20.

2. Mäkitaipale J, Harcourt-Brown FM, Laitinen-Vapaavuori O. (2015). Health survey of 167 pet rabbits (Oryctolagus cuniculus) in Finland. Veterinary Record, 177(16), 418. doi:10.1136/vr.103213.

3. Bagha F, Keeble E. (2024). Incidental osteoarthritis: risk factors, prevalence and clinical evidence in rabbits. Companion Animal, 29(2), 2–5. doi:10.12968/coan.2023.0049.