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Abstract

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Use of pressure platform gait analysis in cats with and without bilateral onychectomy

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Objective—To determine peak vertical force (PVF) and vertical impulse (VI) in cats that had or had not undergone bilateral forelimb onychectomy.

Animals—26 healthy adult cats.

Procedure—Onychectomized cats ($n = 13$) had undergone surgery more than 6 months prior to the study. The PVF and VI were collected from all limbs of each cat with a 2-m pressure platform walkway. Cats were allowed to walk at a comfortable velocity, and acceleration was restricted to $\pm 0.5 \text{ m/s}^2$. Five valid trials were recorded for each cat with all trials collected in a single 1-hour session. All forces were normalized to and expressed as a percentage of the cat's body weight.

Results—Gait data were successfully collected in all cats. No significant difference was found for PVF or VI between cats that had or had not had onychectomy. Limb loads were greater in forelimbs than hind limbs for all trials. Mean PVF and VI in the forelimbs of cats in the nononychectomy group were 56.41% and 18.85%, respectively. Mean PVF and VI in the hind limbs of cats in the nononychectomy group were 50.22% and 14.56%, respectively.

Conclusions and Clinical Relevance—Gait analysis was successfully performed in cats with a pressure platform walkway. The absence of differences in PVF and VI between the 2 groups of cats suggests that bilateral forelimb onychectomy did not result in altered vertical forces measured more than 6 months after surgery in cats. (*Am J Vet Res*

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Citing Articles

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