

Study on measurement of internal anal sphincter movement in dogs (application as evaluation method on defecation disorder)-2nd report

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It is estimated that the number of potential fecal incontinence patient in Japan is about 5 millions, but no fundamental treatment has been developed. Therefore, new treatments and novel drugs have being desired to be developed at present. Screening with model animals is important for developing new therapeutic agents. Therefore, we developed a measurement method of internal anal sphincter (IAS) movement in un-anesthetized and unrestrained dogs by placing the force transducers used for gastrointestinal motility measurement in the IAS and each gastrointestinal tract, and measuring the defecation movement using a telemetry method and reported the results of the research at the 92nd Annual Meeting of the Japanese Pharmacological Society. In the previous experiments, INS was observed to contract after dosing noradrenaline and the contraction was suppressed or enhanced by α -blocker or β -blocker, respectively, but it was different under anesthesia from that under awakening. In the present study, a cholinesterase inhibitor was administered and the INS movement was determined to confirm whether the cholinergic mechanism is involved in INS; and the effects of comparative control substances were also examined to evaluate the action of drugs on INS movement.