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Poster Sessions

**Study on measurement of internal anal sphincter movement in dog
(application as evaluation method on defecation disorder)**

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There are 3 types of fecal incontinence: leaky fecal incontinence, urgent fecal incontinence, and abdominal pressure-induced fecal incontinence. It is said that approximately 49% patients with fecal incontinence are leaky fecal incontinence. If anal sphincter is weakened, leaky fecal incontinence will occur. Since no effective therapies exist, new therapies and therapeutic drugs have been desired. Therefore, a measurement method of internal anal sphincter movement was developed by placing a force transducer used for gastrointestinal motility measurement in the internal anal sphincter muscle and each gastrointestinal tract, and measuring with a telemetry method under unanesthetized and unrestrained dogs. As a result, it is confirmed that adrenergic receptors existed in the internal anal sphincter, and noradrenaline α receptor and β receptor associated with contraction and relaxation of internal anal sphincter, respectively. However, this response under anesthesia was observed to be different from that under arousal, suggesting involvement of the autonomic nervous system; its mechanism of action and the involvement of other receptors were also investigated.