

Research into Canine Obsessive-Compulsive Disorder

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Introduction

Obsessive-compulsive disorder (OCD) is well known as a debilitating psychological disorder of humans. More recently however, it has also been recognised as a significant condition of canids, possibly affecting 2 - 3% of the population (Overall, 2001). OCD, as with all behavioural problems, can have serious welfare implications - not only by negatively impacting on the daily lives of afflicted animals, but also through a significant role in the relinquishment and euthanasia of companion animals (McMullen et al., 2001; Overall, 2001; Seksel and Lindeman, 2001). Due to its medical and welfare impact, OCD is subject to ongoing discussion, for example in papers by Overall (2001) and Landsberg (2001), which aim to educate veterinarians regarding diagnoses, pathogenesis and treatment. Research also continues into treatment, as seen in the recent clinical trial of Clomipramine by Seksel and Lindeman (2001).

Discussion

The Diagnostic and Statistical Manual-IV (American Psychiatric Association, 1994) describes human OCD as the expression of obsessions and/or compulsions, with only one needed to arrive at the diagnosis. Obsessions are recurrent or persistent thoughts or impulses experienced by an individual. They are intrusive, cause marked anxiety or distress and individuals attempt to ignore, suppress or neutralize them with other thoughts or actions. Compulsions are repetitive or ritualised behaviours or mental acts, often in response to obsessions, aimed at reducing distress or preventing a dreaded event.

Similarly, OCD in canids is identified by repetitive, exaggerated or sustained behaviours that exceed normal requirements and interfere with daily activities (Landsberg, 2001; Overall, 2001; Seksel and Lindeman, 2001). The behaviours can be variable in expression, need not be repetitive (eg: staring) and may be originally connected to a stimulus, such as a stressful or frustrating event, although later shown outside this context. Commonly seen behaviours include staring, licking/chewing of limbs and spinning (Landsberg, 2001; Seksel, and Lindeman, 2001).

In her recent paper, Overall (2001) identifies OCD as one of the most difficult disorders to diagnose and treat. Overall (2001), Landsberg (2001) and Seksel and Lindeman (2001) all note OCD's complex, multi-factorial nature, recognising that, although an underlying abnormality in serotonin and noradrenaline metabolism is the major contributing factor, environmental, genetic and neurochemical/neurophysiological components are also involved. Overall (2001) and Seksel and Lindeman (2001) also note that the longer OCDs go untreated the more severe and complex they become.

Landsberg (2001), Seksel and Lindeman (2001) and Overall (2001) all highlight the importance of a thorough behavioural history and full clinical examination before diagnosing OCD. These investigations rule out seizure foci, ophthalmic conditions, cognitive dysfunction, systemic or systematic diseases (i.e.: immunological, musculoskeletal, neurological, dermatological, infectious or neoplastic disease) and other behaviour problems (such as attention seeking behaviours), all of which may cause behaviours similar to OCDs (Landsberg, 2001).

Landsberg (2001) and Overall K (2001) place particular importance on discriminating between OCD and seizure foci, something historically unrecognised. Seizure foci result from abnormal brain function or mechanical lesions and can manifest as abnormal behaviours (e.g.: repeated movements). However, the behaviours differ from those in OCD in that they arise independent of stimuli, are not predictable or regular and cannot be interrupted. Other features of seizure foci, such as 'confusion' after the behaviours, may also be seen in some

OCD cases and care must be taken to distinguish the disorders and treat appropriately (Landsberg, 2001; Overall, 2001).

The management of OCD involves pharmacological therapy in addition to behavioural and environmental modification (Landsberg, 2001; Overall, 2001; Seksel and Lindeman, 2001). Without an integrated approach, treatment will only occasionally work and results will rarely be enduring (Landsberg, 2001; Overall, 2001; Seksel and Lindeman, 2001). In most cases, pharmacological treatment will need to be continued on a long-term basis for results to be maintained, especially if the disorder had gone untreated for a significant period (Landsberg, 2001; Overall, 2001; Seksel and Lindeman, 2001).

Overall (2001), Seksel and Lindeman (2001) and Landsberg (2001) identified abnormal serotonin and noradrenaline metabolism as major contributing factors in OCD and advocate the use of Clomipramine, a tricyclic antidepressant (TCA). Clomipramine has the relevant action of the inhibition of noradrenaline and serotonin re-uptake, which increases the duration of action of these neurotransmitters and may therefore help correct the underlying abnormality (Overall, 2001). In their clinical trial of Clomipramine, Seksel and Lindeman (2001) showed that an initial dose of 1-2mg/kg bid, increased progressively at 2 week intervals (after a month) to a maximum of 4mg/kg bid, when combined with behavioural and environmental modification is effective in the treatment of canine OCD.

When administering TCAs it is important to note that potentially fatal side effects, e.g.: cardiac arrhythmias, have been recorded in humans (Overall, 2001). Although less likely in animals (Overall, 2001; Landsberg, 2001), they should be considered as risks and a full medical history and clinical examination, including ECG, biochemical and haematological tests, should be undertaken before beginning therapy. Assessment of hepatic and renal function is also suggested as these organs are involved in TCA metabolism and excretion. There should also be continued monitoring of the animal to check for any change/abnormality in organ functions (Seksel and Lindeman, 2001; Overall, 2001).

As discussed above, behavioural and environmental modification are vital in any effective treatment plan (Landsberg, 2001). Seksel and Lindeman (2001) emphasise this, identifying a failure in owner compliance as a major limiting factor in the success of their clinical treatment plan. These modifications, which are also suggested by Landsberg (2001), included the removal of/desensitisation to events/stimuli that trigger OCD behaviours, environmental enrichment (eg: toys), stimulation via increased owner/pet interactions (eg: play or obedience sessions) and ignoring or interrupting problem behaviours.

Conclusion

Thus, in order to confidently diagnose and treat OCD veterinarians must have an appreciation of the symptoms and pathogenesis of the disorder (Overall, 2001). Active discussion and research into OCD serves to not only deepen our understanding of the condition, therefore improving the efficiency of diagnosis and treatment, but also leads to improved welfare by increasing the quality of life of sufferers and reducing the likelihood of the surrender or euthanasia of a previously undiagnosed animal (Seksel and Lindeman, 2001).

References

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