

# A case of aggressive behavior in a mongrel dog

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Abstract: A male mongrel dog, two years old, was evaluated for aggression and reactivity to environmental stimuli. The dog was a stray dog; in March 2016 the current owner decided to adopt him. In May 2016 the owners decided to contact a veterinary behaviorist for instructions on how to introduce the dog into the new home, with another dog and to control the high level of his reactivity. The animal, in fact, often barked to dogs, people and cars.

A diagnosis of predatory aggression, territorial intraspecific aggression towards unfamiliar dogs, situational anxiety disorder was made. It was recognized as the basis of aggressive behaviors, a component of stress and anxiety, worsened by previous experiences. A significant impulsivity of the dog was also identified which worsened the prognosis.

Fluvoxamine (1.5 mg / kg bid) was prescribed, in view of the new home moving. The owners were advised to start, with a dog trainer, a behavioral modification program aimed to: implementing the relationship, improving communication and reading the dog's signals, reducing conflicts and potentially critical situations. At the first follow up the owner reported that, although there was an improvement in the intensity of the symptoms, the dog appeared slightly worse in interspecific relationships: he had bitten both owners. At the second follow up the interspecific aggressiveness was decidedly worse, and two episodes occurred again. In general, the dog appeared to be much more intolerant to physical contact with the owners. It was decided to modify the pharmacological prescription, replacing Fluvoxamine with Fluoxetine (1 mg/kg sid).

At the third follow up, the dog was decidedly improved. The owners referred the dog was able to rest better during the night and daytime hours, to relax more at home. A significative improvement in the interactions with the owners was referred too. It was therefore decided to gradually wean from the drug. The owners decided to reduce the meetings with the dog trainer, until their complete interruption. At the last follow up, the improvements in inter and intra-specific relations were relevant.

The owners understood that, despite the behavioral modification process and the pharmacological treatment, the dog presents behavioral problems that must be managed carefully, respecting his ethological needs.

Key Words: predatory aggression, intraspecific aggression, dog, anxiety.

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# Presentation

A male mongrel dog, two years old, was evaluated for aggression and reactivity to environmental stimuli.

# History and presenting signs

The dog was a stray dog; since February 2016 the animal voluntarily begun to follow the current owner with her dog (a neutered male dog, about 4 years old), during their walks in the mountains and in the shops of the town. In March 2016 the current owner decided to adopt the

dog but, not having the possibility of hosting him at home immediately (she planned to move to a larger house, with garden, in the following months), she was forced to shelter him in fenced land of his property. The dog did not show separation problems and he tolerated well the confinement, without aggressive behavior against foreign person accessing the land.

During this period, the dog was habituated to wear the harness and the muzzle and to be led on the leash. Moreover, the dog was engaged in research and problem-solving games, with excellent results.

When the microchip was applied, a blood test was performed to evaluate renal and hepatic functionality that resulted in the physiological range.

During the veterinary examination the dog growled while was manipulated without attacking. The clinical examination was normal.

The dog made regular walks, lasting 1, 2 hours in the mountains, with the other dog.

In May 2016 the owner decided to contact a veterinary behaviorist for instructions on how to introduce the dog into the new home and to control the high level of reactivity of the dog. The animal, in fact, often barked to dogs and people passing in front of the ground (unfortunately it was not possible to obscure the fence) and cars.

There were also some episodes of aggression towards other male dogs with bad consequences for the animal because the big size of the other dogs.

At the time of the first consultation, the owners have already begun to take the dog into the new home, for progressively longer periods of time. The relationship in the house with the other dog was quite good, because the owner prevented any disputes, principally about the food. The only problem reported by the owner is the difficulty of the dog to relax when he was in the garden. He frequently barked at noises produced by heavy vehicles, at children's voices and distant barking of other dogs.

At home the owners complained that dog tended to jump on tables / furniture / kitchen; they tried to invite him to go away with titbit and/or confining him in the study room in which he often chose to go spontaneously.

#### Examination

The behavioral consultation was held in a restricted area, with few surrounding stimuli, with both the owners and the other dog. Both dogs were unleashed.

The predatory behavior it was very exacerbated. The dog seemed to use it as a replacement activity. In general, the owners reported a marked reactivity towards cats, cars (apparently not with scooters/ motorcycles/bicycles) and, during walks in the mountains, towards horses and probably wild animals.

Even during the consultation, the dog spent most of the time chasing lizards and he seemed to almost fix on this activity. He barked to the few dogs that passed during the consultation.

The owners decided to take him on excursion with a 10-meter long leash, because sometimes he reached them in the car one hour after the end of the walk. With the long leash, the dog was apparently more relaxed during mountain walks; the owners were able to contain his attempts to chase potential prey.

Difficulties in managing interactions with other dogs, of the same or opposite sex, on a leash or loose were reported.

Regarding the interspecific relationships, the dog did not seem interested in interacting with strangers, and even the interactions with the owners had to be short. According to the owner, the dog seemed to really relax, only when he was pet by a person. During the visit, in the pauses from the activity of patrolling the land and hunting the lizards, the dog returned spontaneously near the owner, sat down, let her caress him for a short while, then he returned to walk away.

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- Reproductive behavior: not present. The owners had also decided to neuter the dog.

- Somesthesic behavior: it appeared in the norm; the dog did not seem to devote himself for a long time to self-care.

# Diagnosis

Predatory aggression, territorial intraspecific aggression towards unfamiliar dogs, situational anxiety disorder (Overall, 2013). It was recognized as the basis of aggressive behaviors, a component of stress and anxiety, worsened by previous experiences (Landsberg, 2013). A significant impulsivity of the dog which worsened the prognosis was also identified (Overall, 2013; Arata et al., 2014).

#### **Treatment**

Fluvoxamine (1.5 mg / kg bid) was prescribed, in view of the new home moving. Fluvoxamine is part of the Selective Serotonin Reuptake Inhibitor (SSRI) drugs, derivatives of Tricyclic Antidepressants, with lower side effects (Fitzegerald et al., 2013) and currently used in the treatment of anxiety related disorders. Fluvoxamine, specifically, is reported in the literature to be particularly effective as a regulator of behavioral sequence, reducing the consummatory phase of behavior and having an important efficacy on reactivity and aggressive behavior (Dehasse, 1999). Therapy was prescribed for a continuous period of at least 6-8 weeks (Overall, 2013). Studies conducted also in human medicine have demonstrated the correlation between low levels of Serotonin and impulsive aggressiveness (Impulse control aggression, Overall, 2013).

The owners were advised to start, with a dog trainer, a behavioral modification program aimed to: implementing the relationship, improving communication and reading the dog's signals, reducing conflicts and potentially critical situations. The pleasant activities (daily excursions) had to be continued. At the same time, desensitization and counterconditioning of the stimuli to which the dog reacted, was started by the dog trainer. Instructions were given on how to change the environment in which the dog lived, by obscuring the fence that surrounded the garden or leaving a radio turned on when the dog was confined in the studio.

## Follow up

## First follow up

The consultation took place in the same area where the first meeting was held, at the end of July, about 3 weeks after neutering. The dog had gone to live in the new house, and currently the dogs fed a BARF diet. The dog trainer reported an improvement in the dog's learning abilities, but the difficulties in intraspecific relationships persisted.

The owner reported that, although there was an improvement in the intensity of the symptoms, the dog had bitten both owners (without tissues injuries and with a controlled bite) in two specific contexts: the aggression towards the woman was relative to the application of the muzzle after the surgery of neutering; the man was bitten while he was attempting to put the harness on the dog.

According to the owners, the escalation of aggression seemed to be unstructured: the threat phase was very short, almost non-existent, the bite controlled, but the dog did not take long to return to a state of homeostasis as a result of aggression.

In order to avoid conflicts, the owners were advised to avoid potentially dangerous situations:

the harness had to be put on the dog by the woman; the use of the muzzle was suspended; the interaction with strangers avoided.

## Second follow up

In December, there was the second follow up. Both owners and the other dog were present. The interspecific aggressiveness was decidedly worse, and two other bite episodes occurred.

In general, the dog appeared to be much more intolerant of manipulation even by owners than in the past. The animal did not allow to be brushed, dried, or caressed too long, and he used aggressive behavior (growling, biting) to get away from the situations causing discomfort.

The owners also reported: increased reactivity of the dog towards the stimuli already previously known, restlessness even at home, frequent nocturnal awakenings, during which the dog tended to scratch the door of the study or the bookcase present in that room. The dog was confined every night in that room to prevent the other dog from eating his food too. When the owners gave him free access to the rest of the house, the dog continued to scratch the doors, or intensely barked in the garden. The dog occasionally hid pieces of dried meat in the garden, defending them for a long time, especially if he felt threatened by the other dog. Among the cohabiting dogs there were episodes of scuffle, without any harm to either of them. Several times the dog soiled at home at night, urinating against a wall / bookcase / sofa and this was a serious problem for the owners.

It was decided to modify the pharmacological prescription, replacing Fluvoxamine with Fluoxetine (1 mg/kg sid).

## Third follow up

At the third follow up in September 2017, the dog was strongly improved. The owners referred the dog was able to rest better during the night and daytime hours, to relax more at home (an additional kennel was added). The interspecific relationships improved and the owner had learned how to recognize dog pacification. Licking the lips, turning the head (Rugaas, 2017; Mariti et al., 2017) were the signals most used by the dog during excessive or too long interactions. The casual encounters with other dogs were much improved.

It was therefore decided to gradually wean from the drug. The owners decided to reduce the meetings with the dog trainer, until their complete interruption.

The next meeting was set after 3 months, during which time the owners were required to note down and report any ascribable deterioration of the behavior.

## Conclusion

In December the improvements in inter and intra-specific relations were relevant.

The owners understood that despite the behavioral rehabilitation process and the pharmacological treatment, the dog presents behavioral problems that must be managed carefully, respecting his ethological needs.

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#### Un caso di aggressività in un cane meticcio

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#### Sintesi

Un maschio meticcio, di due anni di età, è stato portato in consulenza per aggressività e reattività agli stimoli. Il cane era un randagio che gli attuali proprietari adottarono a marzo 2016. A maggio dello stesso anno i proprietari decisero di contattare un veterinario esperto in comportamento per avere informazioni su come introdurre il cane in una nuova abitazione, con un altro cane, e per controllare il suo alto livello di reattività. L'animale, infatti, spesso abbaiava a cani, persone e macchine.

Fu emessa una diagnosi di aggressività predatoria, intraspecifica e territoriale verso cani sconosciuti e disturbo d'ansia situazionale. Si individua inoltre una importante impulsività del cane che rende difficoltosa la gestione dei comportamenti aggressivi.

È stata prescritta Fluvoxamina cpr da 50 mg, al dosaggio di 1,5 mg/kg bid, anche in vista di un definitivo trasloco nella nuova abitazione.

I proprietari sono indirizzati ad iniziare, con un Istruttore cinofilo, un lavoro volto ad implementare la relazione, migliorare la comunicazione e la lettura dei segnali del cane, ridurre i conflitti e le situazioni potenzialmente critiche, quindi lavorando soprattutto sulla prevenzione dell'esposizione agli stimoli.

Al primo follow up la proprietaria riferiva che, nonostante si riscontri un miglioramento dell'intensità dei sintomi, il cane appariva leggermente peggiorato nelle relazioni interspecifiche: ha morso, infatti, entrambi i proprietari.

Al secondo follow up l'aggressività interspecifica risultava decisamente peggiorata: si sono verificate altre due morsicature. In generale, il cane risultava essere molto più insofferente alle manipolazioni anche da parte di proprietari rispetto al passato.

Si decise quindi di modificare la prescrizione farmacologica, rimpiazzando la Fluvoxamina con la Fluoxetina (1 mg/kg sid).

Al terzo follow up il cane era decisamente migliorato. I proprietari raccontarono che il cane riusciva a riposare meglio durante le ore notturne e diurne, a rilassarsi maggiormente in casa e tollerava meglio le interazioni con i proprietari.

Si decise quindi di svezzare gradualmente il farmaco ed i proprietari decisero di ridurre gli incontri con l'istruttore cinofilo fino a sospenderli del tutto.

All'ultimo follow up, i miglioramenti nelle relazioni intra ed interspecifiche erano rilevanti.

Ai proprietari apparve chiara, dopo il percorso riabilitativo e lo svezzamento dal farmaco, la necessità che le problematiche comportamentali del cane continuino ad essere gestite con grande cautela da parte loro, sempre rispettando le esigenze etologiche dell'animale.