Sexual Behavior Dysfunction in Stallions

Sue M. McDonnell, KENNETT SQUARE, PENNSYLVANIA

Sexual behavior problems in the stallion include several distinct types of dysfunction. Successful treatment, whether by traditional behavior modification or by pharmacological manipulation, usually depends on diagnosis of the specific dysfunctions involved. The following discussion of behavioral problems, evaluation, and therapy is organized according to the common types of sexual behavior dysfunction in stallions.

LOW LIBIDO

Probably the most common type of behavioral dysfunction in stallions involves inadequate sexual interest and arousal. The problem is most typically seen in young or inexperienced stallions. Listed in Table 1 are some of the behavioral characteristics common among slow-starting novice breeding stallions. Many of the problems appear to be related to inexperience or to a history of active discouragement of sexual behavior during training or performance. Slow-starting stallions typically show remarkable improvement after the first successful copulation. Therefore, the training program should include whatever is necessary to assist the stallion toward the first ejaculation. Young, inexperienced stallions usually show remarkably rapid improvement with simple repeated exposure with minimal restraint and plenty of gentle, patient encouragement. For example, manual stimulation of the penis or application of an artificial vagina can be useful in encouraging a stallion that is reluctant to mount. The stimulus mare often seems more important' to inexperienced than to experienced stallions. A selection of mares showing strong natural estrus is often useful. Interestingly, frisky, even feisty, mares often elicit the desired stallionlike response sooner than will a quiet mare. One of the oldest and most reliable methods is to turn the slow-starting stallion out to pasture with one or more mares.

Some young slow-starting stallions have low levels of circulating androgens. Many of these are young, recently retired racing stallions and just off anabolic steroids. We have found that gonadotropin-releasing hormone (GnRH) treatment (50 μg given subcutaneously 2 hours and again 1 hour before breeding), which usually leads to increased androgen levels within 1 hour after administration, improves sexual interest and arousal.

Novice stallions that appear fearful or anxious in the breeding situation often improve with antianxiety medication. Signs of anxiety include vigilant alertness, distractibility, attention to handlers more than to the mare, and frequent loss of erection. Diazepam (0.05 mg per kg given slowly intravenously 5 to 7 minutes before breeding) sometimes leads to sudden improvement in sexual interest in such stallions.

Managers often find slow-starting stallions frustrating to work with. Unfortunately, it is during this critical time that impatience and mishandling may complicate and prolong sexual behavior dysfunction. Unnecessary punishment should be avoided. The veterinarian can best help by offering the advice that many stallions with exemplary adult breeding behavior started out as slow or "shy" breeders. Our research and clinical ex-

TABLE 1. BEHAVIORAL CHARACTERISTICS COMMON TO SLOW-STARTING NOVICE STALLIONS

1. Little or no interest in mare
2. Sexually "shy" in presence of handlers
3. Juvenile, playful, or submissive responses, e.g., jaw champing, rubbing head against side of mare, or prolonged nuzzling of udder; may even allow the mare to investigate genitals
4. Approach–avoidance responses, e.g., interest at a distance, but anxious when near mare; initial brief burst of interest; hyperdistractibility; discontinuous behavioral sequences; anxious, fearful expression: slow and intermittent erection
5. Awkward precopulatory and copulatory responses, e.g., mounts from the side or head of the mare, mounts without erection, mounts without insertion or thrusting, withdraws before ejaculation, or slow to dismount after ejaculation
6. Prolonged bouts of repetitive single elements of precopulatory behavior, e.g., mouthing the tail, nipping the withers, licking the hocks
7. Marked preference or aversion for particular mares, handlers, or breeding location
8. Hypersensitive to correction or punishment

perience suggests that about 5 to 10 per cent of stallions show some difficulty when first breeding. While most such stallions improve to normal levels of sexual arousal and response within 1 to days of traditional retraining, some require weeks. Most cases resolve on the farm and do not require a specialized behavior modification facility or pharmacological aids.

Although mostly a problem of novice breeders, inadequate libido is also seen in experienced breeding stallions. Some individuals show an annual pattern of problems similar to those of the slow-starting stallion. They may be slow to start the breeding season each spring or, more commonly, may each year experience periods of low libido near the end of a breeding season. Stallions with semen-related fertility problems that result in an increased number of mares to be bred near the end of the season tend to develop aberrant behavior. Some show a gradually diminishing level of arousal and response, others suddenly refuse to breed. These stallions are referred to as stale or sour. Listed in Table 2 are some characteristics common to such stallions. Although poor condition or pain may in some instances be identified as a contributing factor, often the diminished libido appears to have no physical explanation. A sudden reduction in libido can also occur in experienced stallions in association with mishandling or a specific negative experience related to breeding. These stallions may appear anxious or simply disinterested rather than sour. Lowered libido in an experienced stallion usually resolves with time off from breeding or changes in the breeding routine. Diazepam or the GnRH treatments described for slow-starting novice stallions may aid in the return of normal libido.

TABLE 2. BEHAVIORAL CHARACTERISTICS COMMON TO SOUR OR STALE BREEDING STALLIONS

1. Sour attitude, e.g., pinned ears; may lunge at mare with lowered head; bites rather than nips mare
   Little vocalization
   Slow to achieve or regain erection
   May appear to be in pain
5. Preferences or aversions for particular mares, handlers, breeding locations

A change in environment may have positive or negative effects on the sexual behavior of stallions. In experimental situations, most normal breeding stallions show minor though measurable reduction in sexual arousal and response when the breeding location is changed. Some experienced stallions, particularly those that appear dependent on the established breeding routine, may suffer more serious, yet usually temporary, diminished sexual response in association with changes in environment or management. On the other hand, stallions with low libido may show more arousal when moved to a novel environment.

COPULATORY OR EJACULATORY DYSFUNCTION

Some stallions that experience normal sexual arousal fail to ejaculate. These stallions generally fit into one of two distinct categories. One type, referred to here as copulatory dysfunction, appears to involve deficiencies in mounting, insertion, coupling, or thrusting. The second type, referred to here as ejaculatory dysfunction, involves specifically a disturbance in the emission or ejaculation processes. Precopulatory and copulatory behavior appears normal, but emission or ejaculation does not occur. Tables 3 and list some characteristics of each of these problems. Although theoretically distinct, the two categories are not always easy to distinguish.

TABLE 3. BEHAVIORAL CHARACTERISTICS COMMON TO STALLIONS WITH COPULATORY DYSFUNCTION

1. May have difficulty mounting, especially repeatedly
   Difficulty inserting or maintaining insertion
3. Poor coupling, with shallow or irregular thrusts
4. Waves of two to three thrusts, with pauses
5. May appear to be in pain

TABLE 4. BEHAVIORAL CHARACTERISTICS ASSOCIATED WITH EJACULATORY DYSFUNCTION

1. **Typically no arousal problems, at least for initial period of dysfunction, e.g., readily achieves and maintains erection**
2. **Readily and repeatedly mounts, inserts, and thrusts; will continue beyond the typical six to nine thrusts required for ejaculation**
3. **Sometimes squeals and dismounts just as ejaculation appears imminent**
4. **May exhibit signs of ejaculation with no semen; may produce copious amount of presperm fluid.**

After long periods of specific ejaculatory dysfunction, the stallion may become frustrated and fail to mount and thrust with normal vigor.

In most cases of copulatory dysfunction, a physical problem that would explain copulatory difficulty can be identified. Copulatory dysfunction in stallions has been seen in association with potentially painful limb and back problems, pleuritis, aortoiliac thrombosis, neurological deficits, painful testicular conditions, urethritis, and penile lesions. A fairly simple cause of copulatory dysfunction is abrasions on the medial aspect of the carpus incurred during mounting, particularly of a dummy mare. Factors related to an artificial vagina can also lead to reluctance to mount, couple, and thrust or to failure to ejaculate. Some stallions appear extremely finicky about the conditions of an artificial vagina, and slight changes in temperature or pressure result in inadequate coupling or thrusting, or failure to ejaculate. Finally, some stallions show this pattern following a negative experience during breeding. These stallions will mount, but thrust half-heartedly, and may fail to ejaculate.

Many stallions return to normal copulatory function with alleviation or accommodation of the physical problems or pain. Improvement is often remarkable with 10 days to 2 weeks of phenylbutazone treatment. Rearrangement of the breeding situation to reduce pain or stress on affected limbs, such as altering the height or angle of the mare or dummy, can be helpful. For most horses, thrusting can also be enhanced by applying warm compresses and manual stimulation to the base of the penis. Similarly, an artificial vagina with increased temperature and pressure often elicits better coupling and thrusting. Measures taken to increase arousal at the time of mounting can also improve copulatory function. Toward this end, we have found prolonged teasing before mounting and treatment with GnRH to be useful.

Treatment of specific ejaculatory failure includes a variety of neuromyotropic regimens aimed at enhancing smooth muscle contraction. The Klug regimen involves intramuscular injection of 0.01 mg per kg of L-norepinephrine 15 minutes before breeding, followed by 0.015 mg per kg of the β-adrenergic antagonist carazolol 10 minutes before breeding. We have found that a low oral dose of the dibenzazepine imipramine (100 to 600 mg twice a day in grain for minimun of 2 weeks) enhances ejaculatory function. In addition, xylazine, an α-adrenergic agonist, can be used to induce ejaculation ex copula. A dose of 0.66 mg per kg IV can be given to a stallion standing quietly in the stall to induce ejaculation. We collect the semen in a plastic bag positioned over the prepuce by a girth strap.

Retrograde ejaculation (ejaculation into the bladder) is often suspected when there are visible signs of ejaculation but no semen. This condition, common in men, apparently has not been confirmed in the stallion.

UNRULY AND SAVAGE STALLIONS

Another undesirable behavior in stallions is seemingly uncontrollably high libido. Specific problem behaviors include charging the mare, refusal to stand for washing or examination of the genitals, and wheeling and kicking out at the mare or handler. In our experience most cases result from inadequate or improperly applied discipline. We have recently shown experimentally that almost any stallion can develop unruly, dangerous breeding habits within 2 weeks of improper handling. Fortunately, most can be brought under control again with consistent, firm, judicious handling. We have found the most efficient behavior modification strategy for dangerously unruly stallions is to initially bring the horse under control using an expert stallionaire, and then provide training of the handlers with the horse on the home farm. There is little work on pharmacological aids for training unruly stallions.

In contrast to the more simple unruly behavior is the truly savage, aggressive behavior of some stallions. Often quite well-mannered and easy to handle most of the time, these stallions occasionally savage another horse or a handler. By contrast to unruly stallions, they remain refractory to normal retraining techniques. Specific behaviors include charging with bared teeth and lowered head, sometimes picking the handler up by the shoulder or waist, or attacking with forelimbs. Savage stallions, if kept, usually repeat such episodes. Some have been safely bred under bull stud conditions.

Supplemental Readings

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