

# INTERSEX IN A PUG PRESENTING AS FEMALE

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Disorders of sexual differentiation are uncommon in dogs. Intersexuality can exist in a variety of phenotypes. Of all the intersex case 25 percent were true hermaphrodite and 75 percent psuedohermaphrodite in dogs. A three year old pug was presented for primary anoestrus and presence of os clitoris protruding from in between the vulval lips. It was diagnosed as a case of intersex presenting as female. Os from the clitoris was removed surgically to relieve the mucosal irritation.

## Introduction

Disorders of sexual differentiation are uncommon in dogs, with only a small number of reviews have been published giving details of the variety of anatomical derangements of internal and external genitalia (Hare, 1976, Meyers, 1993). Intersexuality can exist in a variety of phenotypes. This is because the gonads can contain a variety of combinations of ovarian and testicular material, either functional or inactive (Meyers, 1993). Of all the intersex case 25 percent were true hermaphrodite and 75 percent psuedohermaphrodite in dogs. In some cases pet is never diagnosed as hermaphrodite and lives life with few problems (Meyers, 1993). This is the case of a pug Intersex presenting as female.

## History

A pug aged three years was presented to the Department of Veterinary Gynecology and Obstetrics, Veterinary College, Hebbal, Bangalore. She came with a complaint of having not come to heat in the past three years. Owner also observed that a small pimple like structure which was visible since the time of 4 to 5 months of age of the pug had now grown bigger and was protruding out. This was causing a lot discomfort to the

animal, which was manifested as constant licking of the protruded structure.

## Clinical Signs and Diagnosis

In this dog which appeared to be a female, on visual examination of the vulva it was noted, that a structure the size of small chilly was protruding out. It was ulcerated on constant licking by the animal. On physical examination the protruding structure was observed to be enlarged clitoris with hard structure within it. Ultrasonic evaluation of the structure was performed. A hyper echoic thick line was visualized. Based on the physical examination and ultrasonography it was concluded that it was a case of enlarged clitoris with os inside. It was tentatively diagnosed as a case of intersex presenting as female with osclitoris or penoclitoris. Other than osclitoris the animal appeared apparently normal.

## Treatment

The abnormalities of sexual differentiation have no treatment (Patrick and John, 1998) .Since the osclitoris was causing constant mucosal irritation and discomfort to the animal the os from within the clitoris was removed. After the surgery the clitoris was effectively covered by the vulval lips.



**Oscclitoris Ulcerated**



**Os removed after surgery**

## Discussion

The most obvious indication of intersexuality is either an enlarged clitoris or an underdeveloped penis and prepuce. In this dog which appeared to be a female, showed the presence of os clitoris and complete absence of oestrus cycle. It was diagnosed as a probable case of psuedohermophroditism as the pet had an enlarged clitoris (Convey and Spotswood, 2012). A differentiation between XX-sex reversal syndrome and female hermaphroditism (Johnston *et al*, 2001) was not possible as there was no information on internal genital tract and gonads available. In this case the os clitoris which was observed as small in size later had increased in size, indicating the testicular tissue had become endocrinologically functional (Johnston *et al*, 2001).

## References

- Convey. A. Neil and Spotwoods Tim. 2012. An unusual case of urinary continence in an intersex Highland white terrier. *Can.Vet.J.***53**:1195-1198
- Hare. W. C. 1976. Intersexuality in the dog. *Can.Vet.J.***17**:7-15
- Johnston Sherley, Margret V Root Kustritz, Patricia N Olson.2001.In Canine and Feline Theriogenology.W B.Saunders.
- Patrick. J Wright and John R Watts. 1998. The infertile Female. Basava Manual of Small Animal Reproduction and Neonatology. Pg.17-34
- Meyers-Wallen V.N.1993.Genetics of sexual differentiation and anomalies in dogs and cats. *J reprod.fertil. Suppl.***47**:441-452.

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