HYSTEROSALPHYNGOGRAPHY IN FEMALE DOGS

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Abstract
Hysterosalpingography (HSG, uterine and fallopian tube radiography) is a medical procedure performed to visualize radiological examination of the female genitalia and to test the permeability of the fallopian tubes. The main problems of the genital apparatus in the bitch are: Ovarian cysts so that the female may no longer be in the estrus or may show signs of continuous estrus, obstructions of the fallopian tubes, uterine and vaginal tumors, metritis, pyrometer.
***Key words**: bitch, genital apparatus, Visipaque, radiography.*

Introduction

Hysterosalpingography (HSG, uterine and fallopian tube radiography) is a medical procedure performed to visualize radiological examination of the female genitalia and to test the permeability of the fallopian tubes.

The purpose of this study was to highlight the permeability of female genital tract using a non-ionic contrast agent, technically known as hysterosalpingography.

The objectives of the study are:

Identification of a method of approaching the female genital apparatus by means of special instruments for the purpose of hysterosalpingography. Determining the amount of non-ionic contrast agent required for hysterosalpingography. Identifying the best approach and radiological exposure of the posterior train to achieve hysterosalpingography in the bitch.

Material and methods

The biological material was represented by a 7 females' dog of different breed, age and sex. The patients were sedated using an association of ketamine and xylazine 2%. A catheter was inserted into the vagina and cervix (fig 1) using radiological guidance (fig 2). The contrast media used was represented by Visipaque 320, the doses were between 4 and 6.5 ml of contrast. After the contrast was injected, for each patient 2 exposure were obtained, one in latero-lateral view and the second one in dorso-ventral view.

Figure 1. Catheterisation of the cervix

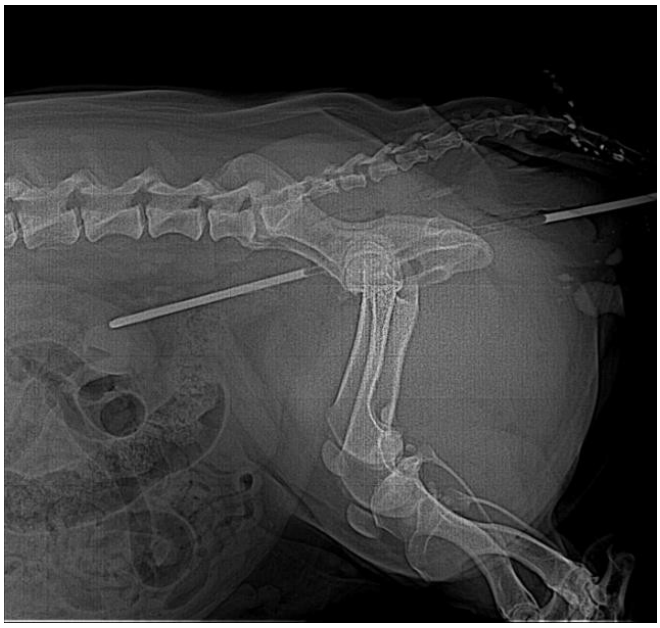

Figure 2 Radiographic evaluation of cervix catheterisation

Results and discussion

Administration of contrast media highlight the cervix and the uterine horn depending of the dog position and the position of the horns. If the patient is put in latero-lateral recumbency, the lower horn will be filled first with contrast (fig 3). Other aspect that influence the contrast diffusion is given by the permeability of the uterine horn due to oestrus period (River and Johnston, 1991). The best diffusion of the contrast into the uterine horn is in estrus (Filedman and Nelson, 2004). Dorso-ventral exposure evidentiate both uterine horns (fig. 4).

Figure 3 Latero-lateral exposure of the uterine horn

Figure 4 Dorso-Ventral exposure of the uterus

The presence of air will affect the contrast distribution in the uterine horn giving the impression of uterine obstruction (fig 5). In case of uterine obstruction, the flow of contrast will be interrupted or there will be no contrast present in the uterine horns (fig. 6)

Figure 5 Presence of air in the right uterine horn

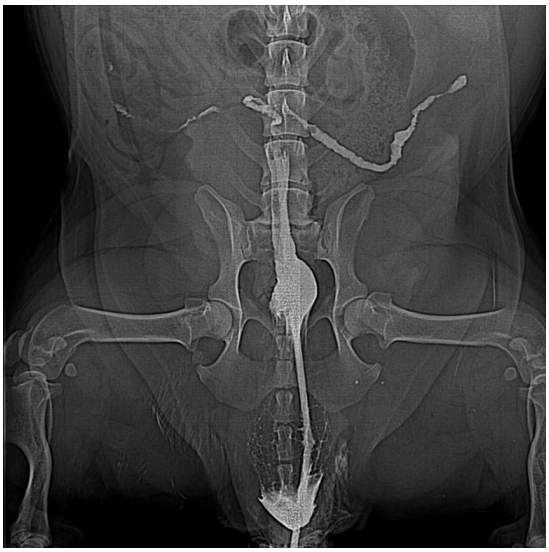

Figure 6 Abnormal flow of contrast in the left uterine horn

Discussion

One of the reasons that the HSG is not used widely in the veterinary field is because the difficult technique for cervix catheterization. The contrast distribution is influenced not only by the body position but also by the position of the uterine horns that could produce uneven contrast intake. Other possible situation that have to be taken in consideration is the rupture of the uterine hors due to increased pressure (Ackerman, 1981).

Acknowledgement: the studies was conducted in the laboratory of Medical Imaging – Radiology and are part of the internal grand research conducted by the Radiology laboratory.

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