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The welfare aspects of surgical artificial insemination in the canine.

Dear Sir/Madam

As a group of veterinarians with a particular interest, and postgraduate specialist qualifications, in veterinary reproduction (theriogenology), we are writing to our colleagues in the profession to consider the ethics and welfare of surgical artificial insemination in the canine.

Surgical insemination (surgical AI) of canines has been used for many years. It involves general anaesthesia of the animal, laparotomy, exteriorisation of the uterus and trans uterine wall introduction of, typically frozen-thawed spermatozoa into the uterine lumen, replacing the uterus into the abdomen, and closure of the laparotomy site. Using the appropriate technologies and expertise for the correct timing of insemination, and handling of the semen, surgical AI was the accepted way of impregnating canines with frozen thawed semen.

Transcervical artificial insemination (TCI) was reported from Scandinavia in 1989 and 1991[1] (Linde-Forsberg et al)- via catheterisation- and New Zealand in 1993[2] (Wilson)- via endoscopy; cited by Romagnoli et al[3]. In 2012 the TCI procedure was reported by Lopate [4], and it has subsequently become a relatively common procedure in veterinary clinical canine breeding practice. Australian (Mason *et al*) [5] and New Zealand (Hollinshead *et al*) [6] reports have illustrated that the fertility of TCI is the same as, or better than, surgical AI in the canine, especially when using frozen-thawed semen. In the study by Hollinshead *et al* [6], only seven of 1103 intrauterine inseminations were not possible via TCI. When performed by trained operators, TCI is usually completed within 10 minutes, without the risks associated with anaesthesia and surgery, and is typically performed with no need for sedation.

Surgical AI has recently been prohibited in the UK by UK animal welfare legislation. (See section 27.2 and 27.30: <https://www.rcvs.org.uk/setting-standards/advice-and-guidance/code-of-professional-conduct-for-veterinary-nurses/supporting-guidance/miscellaneous/>)

As veterinarians it is important that we maintain our social licence within the community to protect the deservedly attained privilege to be the guardians of animal health and welfare. To 'ensure the welfare of animals committed to our care', veterinarians in the profession undertake and 'solemnly swear to practise veterinary science ethically and conscientiously for the benefit of animal welfare, animal and human health, and the community'.

It is our considered opinion that welfare considerations dictate only *per vaginam* artificial insemination (preferably by TCI) in the canine.

Yours

Allan Gunn, Jasmin Hyatt, Annett Annandale, Henry Annandale, Babiche Heil, Carolynne Joone, Mary Ontiveros, Agustin Ruiz, Natali Krekeler, Peter Tazawa, Michael McGowan.

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