

## EXPERIMENTAL ANIMAL MODEL FOR TRAINING OBSTETRIC ANAL SPHINCTER INJURY TECHNIQUES

### Introduction

Obstetric Anal sphincter injury(OASI) following labor is the most common cause of anal incontinence in women .There is a need for obstetricians and trainee obstetricians for proper identification & evaluation of these injuries and develop skills for its repair. An adequate experimental animal model is an alternative for training and humanizing learning, avoiding the first training on humans

Design The Multiparous goats were selected due to similarity with human anatomy and cadaveric goat obtained with intact vagina, anal canal and bladder. The model was introduced for hands on training of 3<sup>rd</sup> and 4<sup>th</sup> degree perineal tears. The participants were shown a 10 minutes video made on the same animal model for repair of perineal tears. This video demonstrated recognition of injury, preparation, suture material for each layer and techniques of repair followed by video the participants were divided into groups. A group of five participants were given one animal model for hands on experience to repair at least one layer.

All participants were asked to recognize the injury and both external and internal anal sphincters. End to end repair technique was used for suturing. Assessment of the quality of the model was carried out in a selected group of participants via questionnaire

### Results

A total of 91 participants including 88 residents (Obstetrics and Gynecology), one physiotherapist and 2 medical officers attended hands on training workshop using experimental "goat pelvis model" for repair of perineal tears.

The participants had graduated on median 7 years before (range 2-30).

29 participants (31.9%) had no previous experience while 43(47.3%) had 0-5 years experience and 19 (20.8%) had 6-10 years of experience. 59(63.1%) could easily identify the goat sphincter while 7(7.7%) were unable to identify.

With reference to the similarity to human vaginal dimensions 10(11%) reported difference, 63 (69.2%) similarities and 18(19.8%) strong similarities.

Evaluating the anal canal anatomy 8 (8.8%) mentioned differences, 75(82.4%) similarities and 9 (9.9%) a strong similarity.

Regarding suture material and techniques as compared to their previous experiences 28(30.8%) described differences, 54(59.3%) similarities and 9(9.9%) strong similarity. Finally considering the degree of recommendation of the animal model for perineal tear repair 75(82.4%) would strongly recommend, 14(15.4%) would recommend it and 1(1.1%) would not recommend it.

### Conclusions

OASI on a Multiparous Goat mimics human anatomy and this is found to be an effective training tool for both residents and consultants.

<b>Specify source of funding or grant</b>	nil
<b>Is this a clinical trial?</b>	No
<b>What were the subjects in the study?</b>	ANIMAL
<b>Were guidelines for care and use of laboratory animals followed or ethical committee approval obtained?</b>	No
<b>Statement that no ethical approval was needed</b>	for use of goat pelvic model no ethical approval required