

## **Information and questionnaire concerning the initiation and development of Natural Orifice Surgery at Burjeel Hospital**

It is our aim to provide as much information as possible about Natural Orifice Surgery to our female interviewees in a comprehensive way. Therefore, we collated the most important information about the technique and prepared a questionnaire which we would like to administer to female patients so we can obtain some feedback about their acceptability of this novel surgical technique. It is important for us to understand if there are special fears or any other doubts regarding this kind of surgery and to establish whether there are cultural differences that may impair the acceptance of this technique.

We believe that providing the right information to the ladies can facilitate their understanding and choice. We will be questioning female potential patients about their opinion regarding the acceptance of 2 surgical operations: excision of the gallbladder and resection of the ovaries.

**Your participation is free, anonymous and voluntary. We would very much welcome your comments!** You have the possibility to write everything that you deem that is important for us to know about your opinion in the free text entries at specified spaces.

When you have finished answering please put the questionnaire in the addressed envelope.

**We will treat all your data as strictly confidential!** We will destroy all data after 12 months and take all responsibility for handling the questionnaire data in the most appropriate fashion!



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## **Definitions**

**Laparotomy** (= abdominal incision), also known as open surgery, describes the process of opening the abdominal wall to perform surgical intervention on internal organs. The abdominal incision will measure at least 5cm.

**Laparoscopy**, also referred as abdominoscopy or minimally invasive surgery (MIS), constitutes a technique where the way of access to the abdominal cavity will not require a large incision, but at least three small incisions varying from 5 to 20mm. The surgical intervention will be performed with special instruments driven by the operator from outside the abdomen. A tube with a camera lens at the end allows examining the content of the abdominal cavity and the performance of surgery. Among smaller incisions, the benefit of minimally invasive surgery includes faster recovering times and reduced pain and discomfort.

**Natural Orifice Surgery** (NOS), also known as Natural Orifice Transluminal Endoscopic Surgery (NOTES) can be seen as a further development of Minimally Invasive Surgery. NOS especially mean that instruments used to perform surgery will enter the body through natural orifices like the mouth, anus or vagina. To get through the operating field, it is necessary to make a short incision in stomach, intestine or vagina which will be closed at the end of surgical intervention. Neither stomach, intestine nor vagina have as many pain sensors as the abdominal wall therefore the incidence of pain and discomfort will be reduced at the minimum in the postoperative period. The recovering time will be also shorter than after laparoscopic interventions.

## **Background**

The development of abdominal surgery in the 19th Century focused on the safe access of the abdominal cavity to perform surgical operations. The 20th Century was characterized by the advancement in surgical techniques that used a minimally invasive approach to safely perform surgical operations in the abdomen. A great help to these developments was the production of a device (solid state camera) that could allow the direct vision and manipulation of the abdominal contents (laparoscopic surgery). Nowadays, the benefits of laparoscopic surgery include a decrease of postoperative pain, decrease in the administration of analgesic drugs in postoperative course, decrease in abdominal wall

postoperative complications, faster recovery and good cosmetic results. Natural Orifice Surgery (NOS) seems to be the next sequential step in surgical intervention. In addition, NOS will minimize the extent and number of surface incisions by optimizing the dimension of surgical trauma. No abdominal incision means minimal abdominal discomfort, no wound infection and no herniation of abdominal contents through weaknesses into the abdominal wall sometimes produced by scars. The time of postoperative hospitalization can be reduced and the patient is able to resume work earlier. The lack of visible scars has made NOS very popular.

Because NOS is still in its early stages, many hospitals all over the world combine NOS and laparoscopic surgery, which is known as the hybrid process. The surgical interventions which had been developed through this approach are the excision of the gallbladder and the removal of the appendix. In the majority of cases, in ladies the insertion of surgical instruments into the abdominal cavity is obtained through the vagina (transvaginal). A minority of NOS interventions have also been performed through the stomach (transgastric).

### **Transgastric approach**

Just as during a gastric endoscopic examination, an endoscope is inserted into the stomach through the mouth. A 3cm incision into the stomach (gastrostomy) will allow the insertion of the surgical instruments into the abdominal cavity to perform the surgical intervention. Finally, the gallbladder will be removed through the mouth.

### **Transvaginal approach**

To enter the abdominal cavity and to insert a 10mm-tube, it is necessary to make a 20mm incision at the top of the vagina, which is called posterior colpotomy. The incision will be closed after surgical intervention and because of the nature of the tissues involved it will heal without a scar and without loss of function. All interventional steps will be performed under direct vision of a 5mm camera.

It has been observed that postoperative infections of the abdominal cavity or functional loss are rare (<1%). In fact, about 3000 patients were successfully treated by this approach with a low rate of complication.

**Now it is your turn!**

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## Questionnaire

### 1. Age (please check, where appropriate)

- ☐ < 20
- ☐ 20-30
- ☐ 31-40
- ☐ 41-50
- ☐ 51-60
- ☐ ≥ 61

### 2. Personal data

Your Weight ..... Kg

Your Height ..... cm

### 3. Profession (please check, where appropriate)

- ☐ nursing service
- ☐ doctor
- ☐ administrative service
- ☐ others

### 4. Marital status

- ☐ married
- ☐ single
- ☐ others

### 5. Education/Profession

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**6. Religion** (please check, where appropriate)

- ☐ Islam
- ☐ Christianity
- ☐ Hinduism
- ☐ Buddhism
- ☐ Non-religious
- ☐ Others \_\_\_\_\_

**7. Did you have a normal vaginal spontaneous delivery?**

- ☐ Yes
- ☐ No

**8. Have you ever had a gastroscopy or colonoscopy?**

- ☐ Yes
- ☐ No

**9. Have you ever had a laparotomy?**

- ☐ Yes
- ☐ No

**10. Have you ever had a laparoscopy?**

- ☐ Yes
- ☐ No

**11. What kind of approach would you prefer if you had to have an operation for **removal of your gallbladder**? Please check, where appropriate!**

- ☐ conventional (open)
- ☐ laparoscopic cholecystectomy
- ☐ transvaginal Natural Orifice Surgery (**NOS**)
- ☐ transgastric Natural Orifice Surgery (**NOS**)

**12. What kind of approach would you prefer if you had to have the **removal of one or both of your ovaries**? Please check, where appropriate!**

- ☐ conventional (open)
- ☐ laparoscopic ovariectomy
- ☐ transvaginal Natural Orifice Surgery (**NOS**)
- ☐ transgastric Natural Orifice Surgery (**NOS**)

**13. If you prefer **NOS** for removal of the gallbladder, what kind of **approach** would you choose?**

- ☐ transgastric
- ☐ transvaginal

**14. If you prefer **NOS** for removal of the ovaries, what kind of **approach** would you choose?**

- ☐ transgastric
- ☐ transvaginal

**15. What are the **reasons** that would induce you to **refuse the transvaginal approach** for the **removal of the gallbladder**?**

- ☐ Fear of postoperative sexual dysfunctions
- ☐ Anxiety about future pregnancies
- ☐ Objections based on moral grounds
- ☐ Objections because of the experimental character of NOS
- ☐ Other objections: \_\_\_\_\_

**16. What are the reasons that would induce you to refuse the transvaginal approach for the removal of the ovaries?**

- ☐ Fear of postoperative sexual dysfunctions
- ☐ Anxiety about future pregnancies
- ☐ Objections based on moral grounds
- ☐ Objections because of the experimental character of NOS
- ☐ Other objections: \_\_\_\_\_

**17. If you know, that the complication rate of the laparoscopic approach is 0-3%, when would you accept NOS as an alternative approach with a comparable complication rate?**

If ... (Please check, where appropriate!)

- ☐ No visible scars
- ☐ No pain
- ☐ Short hospital stay
- ☐ Short sick leave
- ☐ Less complications

**18. What are the reasons that would induce you to prefer any NOS access for your surgery? (Please check, where appropriate!)**

- ☐ No pain of the wound
- ☐ No visible scars
- ☐ Unequaled option
- ☐ Other reasons \_\_\_\_\_

**Thank you very much for taking the time to complete the questionnaire!**