Observership: The Camran Nezhat Institute for Minimally Invasive & Robotic Surgery

Background

The Camran Nezhat Institute for Minimally Invasive and Robotic Surgery is located in Palo Alto, California. This private centre has an international reputation for gynaecological endoscopy and specifically treatment of endometriosis. Dr Nezhat is one of three brothers stationed across America, all Gynaecologists with interest in minimal access surgery. A surgeon, academic and innovator, he pioneered 'video-laparoscopy' and subsequently many operative laparoscopic procedures. Indeed he was initially persecuted for encouraging the laparoscopic approach when laparotomy was the norm; which was especially controversial in certain subspecialisms such as gynaeoncology. He is also the founder of Worldwide EndoMarch, an annual event that strives to break the stigma and silence behind Endometriosis.

The visit

The private clinic is located in Palo Alto adjacent to the Stanford site. A reception filled with orchids greets you and literature available to read in the lobby includes an extensive range of the many of Dr Nezhat's publications. There are two clinical examination rooms with ultrasound machines, offices and Dr Nezhat's consulting room and office where walls are covered in certificates, qualifications and memorabilia such as a photograph of him meeting the Pope. His textbook sits on his desk. There is another Gynaecologist (his niece and prodigy) and two fellows in the team all clad in their white coats. The corridor is adorned with thank you cards and the many photographs of his patients' offspring.

Surgery is performed at Stanford Hospital or a day case surgical centre in San Jose. If bowel resection is anticipated or intensive care input required then patients are automatically listed for surgery at Stanford. All other patients and operations are dealt with in a day case capacity. Two theatres with two anaesthetic teams are utilised at the surgical centre to increase efficiency with the first case commencing at 7am.

The routine daytime schedule involves a morning operating list with two or three cases listed. Clinic runs each afternoon. All patients receive a telephone or FaceTime consultation with the clinical fellow for three consecutive days post op. Patients have a face to face consultation before a flight home, having stayed in a hotel post op rather than hospital bed.

I spent 5 days at the institute (21st-25th May) observing in both theatre and in clinic.

Operative procedures I witnessed included total laparoscopic hysterectomy (16/40 adenomyosis), laparoscopic trachelectomy, laparoscopic excision of endometriosis, laparoscopic salpingectomy, laparoscopic myomectomy, laparoscopic salpingooophorectomy, ovarian cystectomy (for endometrioma) & Novasure endometrial ablation. All patients with endometriosis receive hysteroscopy, cystoscopy and proctoscopy. Cystoscopy is performed routinely post TLH.

In the afternoon clinic I observed a combination of new consults, preoperative appointments and follow-ups. Many patients are tertiary referral for endometriosis having previously

undergone diagnostic or operative laparoscopy. I did meet one lady with primary infertility and no previous abdominal surgery referred following endometrial receptivity testing (ReceptivaDx) measuring high for BCL-6, indicative of endometriosis. They are all counseled by Dr Nezhat on the management options: (1) Do nothing (2) Hormonal therapy (3) Acupuncture, yoga, physical therapies, chinese herbs, prayer (4) Surgery with excision of endometriosis. In this cohort surgery is often selected as other options have been exhausted by this time.

Techniques & strategies encountered

The laparoscopic approach is routinely adopted for hysterectomy irrespective of uterine size (mobility is the more important factor) with vaginal morcellation for the larger uterus. I witnessed reverse vesicouterine fold dissection with development of the 'new space'; an alternative technique for laparoscopic hysterectomy in women with caesarean delivery adhesions. Furthermore Dr Nezhat routinely adds McCall culdoplasty to standard vaginal cuff closure at TLH to prevent apical prolapse. Prior myomectomy all patients receive MRI and endometrial sampling with pipelle and intrabdominal morcellation is not performed. Dr Nezhat opts for mini laparotomy to remove the fibroid.

CO_2 laser with hydro dissection is the preferred method for excising endometriosis and to treat adenomyosis with fertility preservation he superficially diathermies the uterine serosa.

Dr Nezhat has published extensively on the management of deep infiltrative endometriosis involving the bowel and urological system and extrapelvic endometriosis. He advocates the shaving technique particularly if the lesion is 5-8cm from the anal verge. He advises appendectomy in the presence of bowel endometriosis even if macroscopically normal due to risk of occult disease. We also discussed thoracic endometriosis and the multidisciplinary approach of VATS (video-assisted thoracoscopic surgery) and VALS (video-assisted laparoscopic surgery) though I did not have the opportunity to observe this pathology and surgery on this occasion.

I witnessed diagnosis of and counseling for 'niche' (also called isthomocele or uteroperitoneal fistula). This diagnosis not commonly recognised in UK practice causes postmenopausal spotting, discharge, dysmennorhoea, secondary infertility, and increases risk of caesarean section scar ectopic pregnancy and uterine rupture. The myometrial thickness is measured ultrasonographically to guide operative technique. Laparoscopic resection with multiple layer closure is chosen if there are fertility desires and especially if the myometrial thickness measures <3mm. With no fertility desires and thickness >3mm hysteroscopic resection is chosen with alternative strategy hysterectomy.

Letrozole, a 2nd generation aromatase inhibitor, is prescribed off licence for refractory endometriosis pain, 'micro-endometriosis' and 'post-menopausal' endometriosis. It is selected for longer-term use rather than GnRH analogues. Should this be unsuccessful next steps include pain management programme and neuromodulation.

Further points of interest

The observership was stimulating and educational. There are many similarities to UK practice, however, it was also fascinating and refreshing to witness a different health care system and new or alternative ideas and strategies. It was also interesting to see how a surgeon with different endometriosis aetiological beliefs and beliefs surrounding the significance of superficial endometriosis counsels patients and operates.

In the USA there appears little standardisation of practice across centres, which act independently. This highlights the benefits of working within a body such as the BSGE.

Take home points

1. Length of stay & discharge planning: All patients were deemed day case bar bowel resections. This is the patient expectation and team including anaesthetic team mantra. Home is often best, however, in the USA one factor driving this is cost and insurance companies do not want to pay for an inpatient stay. A balance is needed here. In my own unit we could relook at inpatient laparoscopic procedures; some of which could be reclassified and managed as daycase.
2. Telephone consultations including utilising FaceTime are useful in particular for post op or some follow up patients; especially those who have travelled from afar. I plan to investigate the possibility of introducing this into my own unit.
3. EndoMarch: it is important for agencies backing the same cause to adopt joined up thinking and collaborate to increase their impact. For example Endometriosis-UK and EndoMarch are both campaigning for increased menstrual awareness in schools.
4. Dr Nezhat has useful You-Tube videos for patients covering pre, intra and post-operative information. I plan to develop a multimedia platform for our own gynaecology patients involving a smartphone/ mobile app and similar videos.
5. On a personal level adopting a more ‘American’ attitude, having confidence in your ability and conveying as such to patients is important. Observing another institution can reaffirm the excellent care delivered by your own!

I would finally like to take this opportunity to thank the BSGE for their support.

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