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## Illustrations in gynaecology: still controversial?

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**Abstract** Photography in gynaecology is still a field of controversy despite today's easy and handy digital technology, especially for use in minimal access surgery. This article emphasizes the value of photography in gynaecological practice, summarizes the practical difficulties, and encourages good practice with consent from the patient.

**Keywords** Photography · Medical illustration · gynaecology · Minimal access surgery

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### Introduction

In the twenty-first century, technology has shown impressive development in computerized photography. Digital photography is now available for daily use in medicine. Newly available systems provide not only high-quality photos and videos but also great storage capacity and easily reproducible copies of the photographic material. Copies can be printed or stored on CD and DVD.

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### Difficulties in the past—simplicity of the future

Despite this fascinating technology and the possible use of photography in gynaecology there are lots of obstacles to overcome in order to realize these photos.

The need for consent from the patient is suggested by the GMC (UK) and the local policy of the NHS trust. Fears of more “convincing” photographic evidence for use in litigation cases may discourage the taking of an abundant series of photos.

Other reasons are old fashion ideas that photography may increase the operation time or that it is time consuming in busy clinics to counsel our patients about it. However, these issues should not exist in modern gynaecological units. In minimal access surgery, handy system allow recording of photos and videos without any delay of the operation (via the main camera through laparoscope). We can check the quality of our photos/videos in order to keep high-quality data. Systems of a DVD recorder or CD writer are more and more cheap as the technology grows. A simple laptop with an internal connection can do the job. Storage of the data is technically very easy without excessive cost. More sophisticated systems can be found in research units and big university hospitals in the UK.

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### Protect the privacy of the patient

Existing British Medical Association and General Medical Council guidelines state that patients have the right to be given as much information as possible, where in an image might be used. Consent should be requested from patients for all medical photography and for the subsequent use of their images whether or not they can be identified by the picture.

The consent should be obtained from the patient for multiple reasons. The patient has the right to know the purpose of the photos: Is the use of the photos to explain and demonstrate the condition or diagnosis to the patient post-operatively? Is the use of this photographic evidence to assess the results of the treatment later for future follow-up? Is the use of these photos for medical illustrations in posters, journal publications and teaching purposes? Are the videos/photos to be used to assess the progress of a supervised trainee? The clinical–medical photographers should have been trained in obtaining consent from patients. Clear consent forms need to be produced for this purpose, preferably for each speciality. A patient may agree for limited use of their photos and that should be respected. Distribution of images on the

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web some times may not be secure and that should be informed to the patient [1]. The vast majority of the patients in gynaecology agree for medical illustrations. Not only appropriate counselling is necessary, but another reason as well is that all the photographic fields in minimal access techniques is non-identifiable. Is not like in plastic surgery as an example, where the face or other recognizable parts of the patients are included and thus the confidentiality of the patient should be respected in the photo [2].

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### **Methods of photo storing**

Different medical softwares are available for recording photographic material for use in hospitals. It is important when a computer programme is chosen for medical illustration to assure DICOM protocols. There are some common specifications and technical characteristics that are agreed to be respected between companies in order that the stored data can be used with or between the different software products. This detail is vital for the hospital setting or the gynaecological department, because DICOM protocols avoid the risk that precious data or photographic material becoming unusable when software is changed or up dated. Another type of photo storing is by the traditional individual way. Photos or videos are produced directly (without integrating this data in a specific cryptic software programme). In this case each time the data must be separately stored manually on a simple database. The type of the photographic material depends on the use of the photos such as only for file documentation or for future use (studies, audits etc). The same corresponds to videos where short or long in videos can be achieved. It is up to the clinician to decide the number of photos or the length of the video.

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### **What to store and how**

The data should be stored on site for protection. If specific software is in use the storage and tracing of the data is very simple most of the time. If the storage is done without software, then the original saved record is copied and used in another database. The original record is officially part of the patient records and is saved as it is (uncompressed not remastered) for medico legal reasons. The copy of this data is used for illustrations for posters articles etc. These photos can be compressed, change their analysis or use part of them. Information that should be kept for identification are the name, date of birth, hospital number of the patient, specific serial number allocated to the patient, code by discipline (e.g. gynaecology laparoscopy), or pathology (e.g. fibroids). This information helps to trace back these photos. The storage is done on a database in the hospital, or in the computer of the medical illustration department or in the gynaecological department.

Frequent backup on CD and DVD is mandatory (for the original record and copy). Some times data is stored but never used. With experience, useless data or long-numerous photo shots are avoided. In the past storage capacity was more of a concern. Today hundreds of thousands of photos can be stored on a big hard disc drive or DVD. With experience, some technical protocols are developing how to take more efficient photos, more clear shots avoiding multiple bad quality or unfocussed images. In other words, how to best expose the specimen, or from which angle the photo should be taken. These practical rules prevent useless data and bad-quality photos. Potential risk of digital remastering of the photos by the patient also exists. It is recommended to maintain copies in the file when patient request copies of their photos.

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### **Using the photography in digital communicating rooms**

Gynaecological photos can be used in web conferences with like demonstration or with pre-recorded photos and videos. Discussions of cases between multidisciplinary teams can be achieved (oncology—infertility) where the photographic material gives valuable information for the future therapeutic plan. Intranet server photo databases are a possibility to be used by permanent member of staff in the hospital who can log in, in a secure and protected way and search or see photos.

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### **The benefits using photography in gynaecology**

Medical Illustrations in gynaecology give an incredible potential of benefits for the patient, the trainee, the professional and the science. Use of videos and photos can be useful for the assessment of trainees. Improvement of their technique, advice and corrections can be done in a more comprehensive way. After a certain time, there is real evidence of higher quality safe operative technique by the trainee, which is a main concern in the NHS Trust daily practice. Gynaecological units should have systems available for medical illustration because some times, gynaecologist and surgeons may be involved with an unusual condition which needs to have photographic evidence that will be used to get advice from other senior or experienced colleagues (not always present during the operation). Some times, unsuspected diagnosis of a non-gynaecological condition may occur. Available photos may give valuable information in these cases to other specialist without the need of a repeated operation. In the UK, the RITA system (specialist registrar training assessment) may include such proof of standardized tasks and skills that can be evaluated and thus produce more competent junior specialists! In minimal access surgery and especially for gynaecology, numerous photos can be helpful in order to create some computer modelling of the uterus and female reproductive system. Generic 3D animation

explains the process of a surgical technique to the patients, students and trainees without the real background (view of bloody tissues that may upset the public). Other forms of photography may be multi-step illustration that depicts the anatomy, patient positioning and proper approach for performing a certain task in laparoscopy training (medium and higher level of operating experience). An editor may seek scientific illustrations for textbooks or training materials. New modern books seek high-quality photos for better comprehension and more impressive and convincing presentation of a chapter. Illustration is essential for use on the cover of a medical journal, and is intended to entice the viewer to read the journal article. Illustrations play a great role creating impressive and nicely presented articles and papers for publication. If there are difficulties in obtaining new and relevant photos then articles may have more delays in being accepted or even not accepted for publication. Some of the illustrations can be used for educational posters explaining the complex physiological status of a condition or emphasising the benefits of a surgical technique. The Internet and electronic publishing are powerful tools for the dissemination of medical information and have created a demand for medical images. In general, public and medical web sites use more and more interactive photographic pieces incorporate 3D animation into a review of the female anatomy and compare and contrast current practice methods.

### Medical illustration training

Most of the times, medical illustrators are professional photographers, who are available in big Trust Hospitals. Their help is essential and valuable. However, it is often practically impossible to have external photographers present in routine theatre practice. Their job is also costly for the department. We may need to undertake this duty and keep good photographic data. The art of taking photos can also be developed in gynaecology. There are few opportunities for training in medical illustration for gynaecologists. Personal input and some talent are needed some times. Auto-focus devices and automatic photographic cameras give good clear photos most of the time.

### What if no photos are available?

Because of the difficulty and the time needed for collecting these images, professionals created medical illustration sites on the web. These web sites provide generic images which after payment, may be used by medical professionals. Example: a professional writer seeking an image for an annual report, or training materials, for medical and scientific clients; or for anyone looking for the best images in science, technology and medicine.

### Conclusion

In our current practice, we should consider medical photography as a daily must and not only in extreme and rare clinical cases. As a trainee, a specialist registrar's collection of photos can be used as proof of clinical and surgical experience for assessment. Photography is easier with minimal access surgery rather during the open classic abdominal approach. During laparotomies photos can be obtained using digital cameras that the gynaecological department can provide; artistic photo examples are illustrated in Figs. 1, 2, 3, 4, and 5. Medical illustration can be used as proof of high standard quality practice in surgery and decreases unnecessary litigation cases going to court. Overall, the need for more accurate information for the patient should include photographic evidence.



Fig. 1 Ovarian benign cyst: “web superficial vessels”

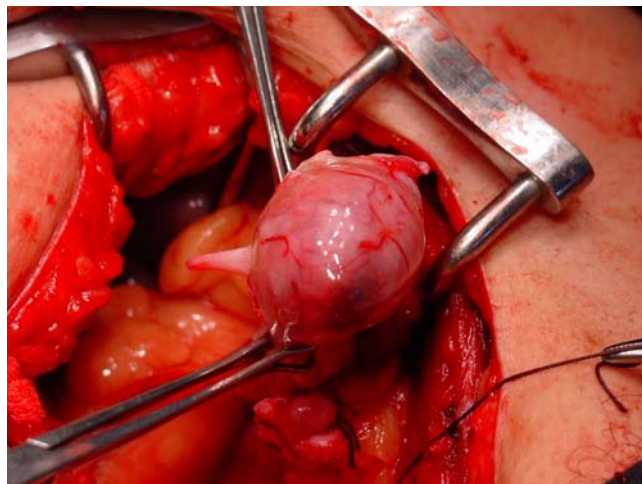


Fig. 2 During bilateral salpingo-oophorectomy: “spines on the surface”

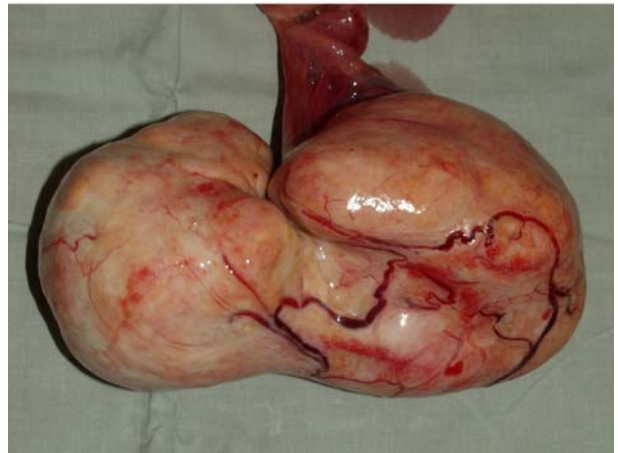
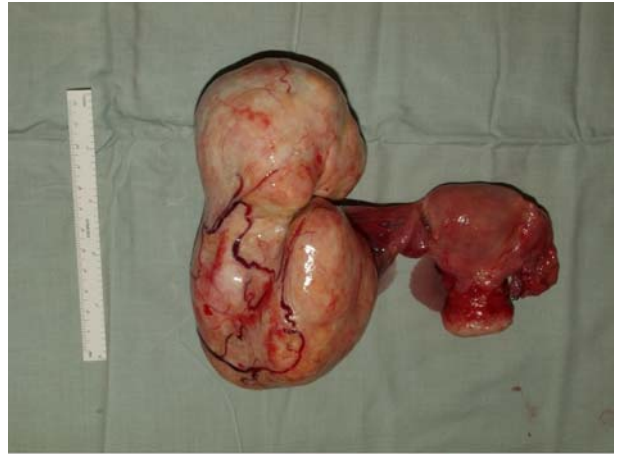


**Fig. 3** Impressive vaginal dehiscence



**Fig. 4** Postlaparotomy wound abscess: “crater”

Good communication skills are needed to have a harmonious relationship with the patient in order to obtain full consent.



**Fig. 5** Benign solid ovarian tumour: “embryo shape formation”

### References

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