FOCUS ON...WOMEN'S HEALTH

Women's Health in the Disaster Setting (The Role of the Obstetrician and Gynaecologist)

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Introduction

Women and children are almost always involved in catastrophe and conflict situations and experience and training in women's health is essential not only for the benefit of the indigenous population but also for the female members of the disaster relief team.

The local medical infrastructure is likely to be disrupted and the more sophisticated it originally was, the greater the problem is likely to be. Where healthcare has been sparse local medical personnel such as child-birth attendants are likely to be available and expectations will be lower.

When the deployment is extended, pregnancy and its complications will be encountered. Especially in a conflict situation, sexual assault is not uncommon and protocols to deal with the risk of pregnancy and sexually transmitted diseases should be in place.

Local conditions may mean that male medical personnel are unwelcome and female doctors should be encouraged to develop skills in obstetrics, gynaecology and emergency family planning before deployment. The specialist obstetrician and gynaecologist must expect to modify his or her practice to meet local requirements and to function as generalist, resuscitation officer and junior surgeon as well as a specialist.

Situation evaluation

This is the critical aspect of any deployment. If this is done poorly, the make up of the team and the equipment provided may be inappropriate. It should be borne in mind that specialists require specialist equipment and back up to function efficiently.

In some situations, it may not be possible to do an evaluation before deployment although every effort should be made to access appropriate intelligence. The American armed forces provide disease information reports on most countries. This may be accessed easily by British military forces but is less easily available to non-military organisations.

Although gynaecologists are specialists it should not be forgotten that they have general skills in resuscitation and surgery as well as a reasonable knowledge of general medicine.

The decision as to which role to use a gynaecologist will be made in the light of the local conditions and the casualty mix. The

temptation to concentrate on one's area of expertise must sometimes be resisted and the good of the many respected. The gynaecologist may well not be acquainted with the big picture and will therefore take guidance and instruction via the chain of command.

Fig 1. Immunisation in progress at Kibeho Refugee Camp

Personal specification

What type of individual is required? Professionally the doctor should have sufficient experience and confidence to deal with the common life threatening obstetric and gynaecological conditions such as ectopic pregnancies, Caesarean sections and bleeding associated with pregnancy and delivery. It is reasonable to expect gynaecologists to carry out a supervised laparotomy for abdominal trauma and many gynaecologists, especially those with an interest in oncology, will be able to carry out small bowel resection and perform colostomies.

Gynaecologists should be encouraged to attend advanced trauma life support courses and obstetric emergency courses before deployment. There will almost always be a time constraint and doctors who are likely to be deployed should be kept up to date. Mental and physical stamina allied to a sense of humour are essential as is the ability to recognise one's limitations. The ability to tolerate others and the ability to be tolerated oneself is paramount. Youth and enthusiasm are very desirable but flexibility, adaptability, humility and the ability to obey orders are equally important.

Problems to be dealt with are likely to be different from everyday practice and advice should be sought from local obstetricians and gynaecologists. However standard gynaecological procedures may be indicated if time permits!

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Fig 2. The first vaginal hysterectomy on the operating table of 23 Parachute Field Ambulance

Gynaecological conditions which are likely to be encountered **Early pregnancy problems**

Vaginal Bleeding

In women of childbearing age pregnancy must be excluded and a pregnancy test should always be carried out. If the test is positive the presence of the pregnancy in the uterus should be established. Ultrasound may be useful but is only as good as the person doing it and is frequently inconclusive.

The possibility of ectopic pregnancy must be considered and it is important to remember that the classic triad of a delayed period, pain and bleeding is absent in a third of patients.

Maintain a high level of suspicion for ectopic pregnancy.

Not all women who have an early pregnancy loss require an evacuation of the uterus. However the need for anti-D administration should be ascertained and the patient should be referred for an ultrasound scan to ensure the uterus is empty.

Occasionally women who have a spontaneous abortion bleed profusely. This may cause shock and the treatment is to carry out an examination, visualise the cervix and to remove any products of conception lying in the cervical os. Distension of the cervical os can cause vaso vagal shock.

Bleeding related to Contraception

This is common, especially on the depot contraceptives such as Depo-Provera® and

Norplant® and the combination of amenorrhoea, vaginal spotting and abdominal discomfort or pain may be difficult to diagnose and treat.

If a woman who has been previously settled on an oral contraceptive pill develops break through bleeding without any obvious precipitating factor, then the possibility of pelvic inflammatory disease, especially due to chlamydia, should be considered and screened for. Menstrual disturbances are common with stress and sudden changes in weight.

Prolonged painless vaginal bleeding in the non-pregnant may be due to anovulation and is preceded by a period of amenorrhoea and a relative deficiency of progesterone. It can usually be controlled with progestogens such as norethisterone 10mgs tds dropping to 5mgs tds for two to three weeks in the first instance. Heavy menstrual loss is reduced by tranexamic acid one gm qds for the heavy days of the period.

In the indigenous population prolonged bleeding may be due to long term retention of products of conception in the younger woman or bleeding from tumours of the cervix and uterus in the older population.

The Management of the sexually assaulted woman

The most important considerations, given the limited nature of the resources are:-

- Treatment of the physical injuries
- Prevention of infection
- Prevention of pregnancy

Sexual assault may result in a wide range of bodily injuries. The commonest being whole breast being chopped off, vaginal lacerations and bruises sometimes with concomitant damage to the internal pelvic organs may occur.

Securing haemostasis and suturing the lacerations along with assessment of the internal damage is the priority in such cases. Appropriate pain relief should be given. Temporary catheterisation of the urinary bladder may be necessary if suturing.

Prevention of Infection

Two sources of infection should be considered. Firstly infection acquired from local contamination of open wounds especially if they are extensive. Broad-spectrum antibiotics such as Augmentin, covering most common wound infections can be used. Tetanus prophylaxis is important and readily available.

Screening for the second group of infections, i.e. sexually transmitted diseases (STDs) may not be practical. Depending on the resources available various treatment strategies can be adopted.

The treatment of Sexually Transmitted Diseases (STD) after rape and sexual assault is an important issue, especially with regard

to HIV/AIDS. However it may be unrealistic to expect to provide HIV prophylaxis to all rape victims.

Post-Exposure Prophylaxis (PEP) in HIV/AIDS:

This is important in places like Rwanda where the prevalence of HIV is high and rape may be committed with the intention of inflicting disease. PEP is recommended if the assailant is known to be HIV positive or when there is a strong clinical suspicion. The risk of infection following exposure (male to female/female to male) is 1:300, and the risk following oral sex is 1:1000. PEP in HIV is the most effective when started within 72 hours of exposure. The recommended regimen following a high-risk exposure is

Zidovudine	200mg tds.
Lamivudine (3TC)	150mg bd.
Indinavir	800mg tds.

The cost of a 28 day course of the combined treatment is £350. The risk of sero-conversion is reduced by 80% with the use of Zidovudine alone.

Gonorrhea, Chlamydia and other infections:

The single most effective drug against gonorrhea and chlamydia in terms of efficacy and compliance is a single dose of Azithromycin 1gm. taken orally. This is also effective against Gonorrhea, Chancroid, Granuloma Inguinale, Lymphogranuloma Venereum and Non-specific Urethritis (NSU). The cheaper option but one needing compliance is doxycycline 100-mg bd. for 7 to 21 days for various infections. Erythromycin is also effective against chlamydia and the most other STD. Metronidazole 400-mg bd. or tds. covers Trichomonas and Bacterial Vaginosis.

Hepatitis B vaccination:

Guidelines are available for vaccine-preventable STDs including recommendations for the use of hepatitis A and hepatitis B vaccine. Hepatitis B immunoglobulin can also be given.

Emergency contraception

Indications

Indications for emergency contraception include:

- unprotected sexual intercourse, rape, coitus interruptus, ejaculation on the external genitalia
- barrier method failure
- oral contraceptive failure
- Recent use of potential teratogens.

Potential pill failure

This will occur with the combined pill if two or more pills have been missed from the first seven pills in a packet, or four or more pills mid-packet. If two or more combined pills

are missed from the last seven pills in a packet emergency contraception is not necessary provided that the pill free break is omitted.

With progestogen only pills, one or more pills taken more than three hours after the usual pill taking time may result in contraceptive failure.

Potential IUCD failure

Causes include:

- Complete or partial expulsion of an IUCD
- Mid cycle removal of an IUCD

Methods of Emergency Contraception

Hormonal

As soon as possible up to 72 hours after unprotected intercourse - the sooner the more effective.

- Schering PC 4- equivalent to two tablets of Eugynon50 taken immediately and repeated after 12 hours
- Progestagen only- two doses of the following (12 hours apart)
25 Microval, 20 Neogest, 20 Norgestron
- Levonelle 2 one table repeated after 12 hours has been recently licenced and is well tolerated

The advantage of progestogens is a reduced level of side effects, particularly vomiting.

If using a product outside the product licence, it is important to explain the risks and benefits and to obtain and record the patient's consent. A record of the patient's details and prescription should be kept.

A medical history must be taken and pregnancy excluded, with specific enquiry about any history of thromboembolism and of migraine with an aura.

IUCD as emergency contraception

The IUCD is very effective (only four documented failures so far!) and can be used when hormonal methods are contraindicated. A past history of ectopic pregnancy is only a relative contraindication. The coil can be removed at the next menses. A past history of thromboembolism or migraine at presentation are not contraindications.

The copper IUCD is inserted in the normal way (Mirena not recommended) and is effective up to five days after unprotected intercourse, it can also be used up to five days after the earliest calculated ovulation date.

It is good practice to screen for STDs especially after assault or casual encounter including chlamydia as there is a risk of pelvic infection after IUCD insertion. If there is clinical evidence of infection, it should be treated with doxycycline or Azithromycin.

Contraindications to emergency contraception

These are summarised in table 1.

Table 1 Contraindications to emergency contraception

Condition	Combined hormonal	Progestogen only	Copper IUCD
Suspected pregnancy	Contraindicated	Contraindicated	Contraindicated
P/H ectopic pregnancy	Not contraindicated	Not contraindicated	Relative contraindication
P/H Thromboembolism	Relative contraindication	Not contraindicated	Not contraindicated
P/H Migraine	Only contraindicated if previous history of migraine with aura	Not contraindicated	Not contraindicated

Emergency hormonal contraception does not protect against pregnancy for the rest of the cycle.

Subsequent menstruation

In one study 57% of women started their period within three days of expected onset, 15% started early, 15% started late (up to seven days) and 13% were more than seven days late.

Efficacy

The failure rate of post coital hormonal contraception is probably 5–10% and rises in proportion to the time since intercourse. The recently marketed Levonelle 2 is thought to have a lower failure rate. The IUCD failure rate is much lower at around 1%.

Pelvic Inflammatory Disease

Acute pelvic inflammatory disease may cause a high fever and peritonism. It may follow childbirth or abortion or occur acutely due to a sexually transmitted disease. Pelvic inflammatory disease often becomes chronic with periodic acute exacerbations. The treatment is rest, fluids and antibiotics.

Bartholin's abscess is an abscess of one of the paired bartholins glands situated posteriorly in the vulva which may be painful but simply treated by incision and drainage through the inner part of the labia majora posteriorly.

Long term complications of childbirth

These include the devastating effects of neglected labour such as vesico-vaginal and recto-vaginal fistulae. These conditions lead to urinary and faecal incontinence and the women being ostracised. However the management of these injuries is complicated and outside the scope of this article.

Female Circumcision

This custom is still widely practised in many parts of the world and considerably increases the risks of childbirth by causing delay in the second stage of labour. There are risks both

to the mother and to the baby. It may be necessary to carry out a reverse episiotomy to allow delivery of the baby without major degrees of tearing of the perineum. In the UK it is illegal to repair an episiotomy in such a way as to make intercourse difficult or impossible. Obviously this may need to be varied under local conditions, and indeed aid agencies such as *Medicins sans Frontiers* have allegedly been involved in providing sterile instruments for female circumcision to be carried out.

Training and Equipment

Most British trained obstetricians and gynaecologists will not have any experience of the gross pathology that they will encounter and it may be necessary to go back to older textbooks such as Munro-Kerr's textbook of gynaecological surgery for guidance.

The treatment guidelines in International Dispensary Association packs are excellent sources of advice for population aid. UNICEF also publish useful guidelines for pregnant women. The Royal College of Obstetricians and Gynaecologists run a course with the Liverpool School of Tropical Medicine- The Diploma in Reproductive Health in Developing Countries. The content covers maternal care, safe motherhood, sexually transmitted diseases and family planning. The course lasts 12 weeks and would be helpful if a planned longer term deployment was envisaged.

For military personnel an update BATLS or ATLS course would be helpful as well as attendance on an obstetric emergency course such as the Advanced Life Support in Obstetrics (ALSO) or Managing Obstetric Emergencies and Trauma (MOET) courses. Military personnel should have attended a Principles of War Surgery course.

Specialist equipment may not be available in the field, in which case the gynaecologist may need to carry equipment himself. Basic surgical equipment to enable evacuation of the uterus, obstetric forceps or disposable vacuum extractors, broad spectrum antibiotics and oxytocics are essential. Experience in the use of local anaesthetics and agents such as ketamine prior to deployment is very desirable.

Conclusion

Be prepared! Think what you may need in terms of equipment and training. We are all trained doctors and we should maintain our general skills in life support and resuscitation as well as our specialist expertise.