

by large pyosalpinges and is responsible for widespread infertility. Pelvic tuberculosis, too, may produce gross lesions in communities with low resistance and poor facilities for diagnosis and treatment.

Delay: Delay in seeking medical aid leads to patients coming when tumours, such as fibroids and ovarian cysts, are already large. Ectopic gestations, common because of the frequency of salpingitis, more often progress to advanced abdominal pregnancies when the symptoms of slow rupture are tolerated earlier on.

Obstructed labour, too, is ubiquitous in the tropics because of delay in seeking treatment. The high incidence of contracted pelvis, due to stunting of the growth of future mothers by malnutrition and untreated infections in their childhood, increases the number of disasters when modern maternity facilities are sparsely distributed. Injuries of the bladder and rectum sustained during difficult labours are therefore a major problem in many tropical areas, whereas they have become rare in Europe except as a result of surgical accidents.

Under-developed countries are usually also under-doctored and, worse still, such medical facilities as there are may be under-used because the majority of the people do not yet accept their value: confidence in modern scientific medicine is least common amongst middle-aged and elderly women, the least emancipated and the most superstitious group in any community – including the British Isles.

Tradition: Strong taboos and traditional beliefs to do with health and disease are part of every culture. In tropical countries these will be unfamiliar to those of us who grew up in Europe but nevertheless they must be studied and understood because they form an important background to the practice of our specialty: advising a woman to have a hysterectomy for menstrual dysfunction may be unacceptable, for instance, if she would lose her status in a polygamous union if she ceased to menstruate; by contrast, this radical treatment is often welcomed by an English woman who has completed her planned family – the local context is very different.

Some traditional gynæcological procedures may have disastrous sequelæ, especially radical female circumcision. It is surprising that this has survived in Africa in spite of strong official and unofficial discouragement.

Geography: Working in the tropics has the advantage that one is constantly reminded that inheritance as well as environment influences the incidence of disease: for instance, the negro peoples characteristically have a high proportion

of keloid-formers, which greatly influences the reaction of their tissues to trauma and infection and may thus spoil the results of the most careful reparative surgery. Endometrial carcinoma, even allowing for the differences in parity and age-structure of the population, is less common in Africans than in Caucasians. Uterovaginal prolapse is a major problem in South India, whereas it is not so in tropical Africa. Chorionepithelioma is another example, which has its maximum incidence along the South-east Asian seaboard. Endometriosis is very rare in Africans and in some other tropical peoples, but this may be related to their almost universal early start to child-bearing. The condition may appear more commonly in future with increased differentiation into social classes, if the new upper strata unfortunately learn to defer their first pregnancy until they think they can afford it.

Conclusion

From these comments, it will be seen that those of us who work in the tropics view the gynæcological problems of Western society with a certain detachment; indeed, to be a woman in the tropics is perhaps not always disadvantageous. In general, however, gynæcology in the tropics includes all the clinical conditions seen in temperate climates, with quite a few more very difficult problems added. It is with some of these problems that this symposium is concerned.

Professor D B Stewart

*(Department of Obstetrics & Gynæcology,
University of the West Indies, Jamaica)*

Ulcerative and Hypertrophic Lesions of the Vulva

This communication deals with four conditions which produce chronic vulval lesions in the tropics. All four may be mistaken for carcinoma and two at least predispose to malignant change.

Vulval schistosomiasis may be found wherever *Schistosoma hæmatobium* or *S. mansoni* are endemic. The gravid female worms migrate within veins to deposit their ova in tissues near the lumen of a hollow viscus, usually the bladder (*hæmatobium*) or the bowel (*mansoni*); either species may get into the veins of the genital tract and deposit ova there instead. The ova first cause hyperæmia and an inflammatory reaction and later become surrounded by areas of granulation tissue described as pseudotubercles; when close to the skin these produce raised, flat or papillomatous masses which frequently ulcerate. Vulval schistosomiasis is found mainly in children, while lesions of the vagina and upper genital tract

usually occur after puberty: lesions of the bladder or bowel are almost always present as well. The diagnosis is by biopsy. Opinions differ as to whether this disease predisposes to carcinoma.

Vulval lymphædema, secondary to tuberculous inguinal lymphadenitis, occurs mainly in places like the forest zone of West Africa where tuberculosis is common and resistance is low. Usually tuberculous adenitis proceeds to abscess formation; secondary infection is added when it points or is incised unskillfully. The end result is fibrosis of the nodes and obstruction of the lymphatics. Depending on the extent and distribution of the obstruction, all or part of the vulva, the mons veneris and one or both legs become swollen. The vulval skin is thickened, rough and often moist with many superficial lymph vesicles. Biopsy of the affected nodes may confirm tuberculosis. The result of surgical incision of the vulval lesions is disappointing, as the swelling frequently recurs. A similar condition may sometimes result from filariasis in places where this disease is endemic.

Lymphogranuloma venereum is caused by an organism similar to those of psittacosis and trachoma, now placed in the *Bedsonia* or *LPT* group between large viruses and small bacteria. The diagnosis can be supported (but not really confirmed) by the Frei intradermal skin test which gives many false negatives or by the more reliable lymphogranuloma complement fixation test which is significant if positive in a titre of more than 1:40. The infection seems to be usually but not always acquired by sexual contact.

The typical inguinal buboes are less common in women than in men; the converse is true of rectal lesions, which begin with a granular proctocolitis and proceed to fibrosis and stricture.

The earliest genital lesion is a shallow ulcer which usually deepens to destroy underlying and adjacent tissue. As the infection burns itself out the ulcers heal, leaving characteristic fenestration of the labia minora, 'bridges and tunnels' of skin around the introitus, or complete or partial destruction of the urethra. If the vagina is involved it may be shortened or even completely occluded. If the rectum is also diseased a rectovaginal fistula may form, usually at the apex of the perineal body and just below the lower limit of the stricture. The anal sphincter is frequently distorted and incompetent. Prolapse may develop as a result of habitual straining at stool when there is a very tight stricture. In some cases the labia majora and clitoris become swollen but the swelling is soft and puffy and the overlying skin fairly normal. Even the active genital ulcers are almost painless and only slightly tender, so the destructive process may be quite advanced before the patient seeks treatment. The histological

appearance of the lesions is remarkably chronic: there is little or no epithelial unrest and the base of the ulcer is made up of loose collections of lymphocytes and plasma cells and a few giant cells. It is hard to understand why they are so destructive; possibly nerve fibres are involved and there is a trophic element to this process. In the active stage the infection responds to treatment with sulphonamides or tetracycline. The later repair of a destroyed urethra or of a rectovaginal fistula is often very difficult.

There is evidence that this disease may predispose to malignancy. Carcinomas of the vulva, vagina, urethra and anus have been seen following lymphogranuloma venereum affecting these areas.

Donovanosis (Granuloma inguinale) is caused by a small encapsulated diplobacillus, *Donovania granulomatis*, which is mainly found within the cytoplasm of large mononuclear cells. The diagnosis depends on demonstrating these 'Donovan bodies' in tissue smears prepared with Giemsa's or Leishman's stain. The infection seems to be acquired by sexual contact, though partners of the patients are frequently unaffected, so probably only some of those who are exposed actually contract the disease.

This is primarily a skin disease. Discrete raised papules break down into exuberant ulcers with a rolled edge and an irregular dark red base; the ulcers coalesce and extend slowly over the genitalia and often along the crural folds to the groin or over the perineum to the perianal skin. Primary perianal lesions may occur in males. The ulcers are painful and tender.

Extensive hard irregular swelling or 'elephantiasis' of the labia is common in advanced cases; this may require surgical removal after the infection has been controlled. The cervix may be affected and look like carcinoma. Rectal lesions are rare. Extragenital ulcers may occur, particularly in the mouth, presumably as a result of autoinfection. Occasionally the disease spreads to involve the pelvic cellular tissues, the peritoneal cavity or the bones.

On section the ulcer edge shows great epithelial unrest, giving a pseudoepitheliomatous appearance which may easily be mistaken for a well-differentiated carcinoma; the base is a dense granulomatous exudate with scattered micro-abscesses. Sometimes Donovan bodies can be demonstrated in large mononuclear cells by means of silver stains but this is not as reliable as the tissue smear for diagnosis. The ulcers heal during treatment with streptomycin or tetracycline; a rapid response to streptomycin tends to confirm the diagnosis, if this has been in doubt.

Unquestionably this disease predisposes to carcinoma which may develop either while the infection is active or after it has apparently been

controlled. Multiple biopsies must be taken before treatment and prolonged follow up is essential. Any ulcer which heals incompletely or recurs should be viewed with great suspicion.

In the West Indies and in other tropical areas multiple venereal infections are common; one individual may show signs of three or four different diseases; it is particularly confusing when lymphogranuloma venereum and donovanosis occur together. The incubation period of these diseases is unknown and there is evidence that many individuals acquire the infections and never develop lesions or do so months or years later. Possibly this explains the sporadic occurrence of the chronic venereal granulomata even in tropical clinics and their relative infrequency among the immigrant population in Britain. However, they need to be kept in mind, particularly in the differential diagnosis of genital malignancy in both sexes and because they probably predispose to carcinoma.

REFERENCES

- Lawson J B (1967) In: Lawson & Stewart (1967) p 466
 Lawson J B & Stewart D B eds (1967) *Obstetrics and Gynaecology in the Tropics and Developing Countries*, London
 Magdi I (1967) In: Lawson & Stewart (1967) p 416
 Rajam R V & Rangiah P N
 (1954) *Wld Hlth Org. Monogr. Ser. No. 24*
 Stewart D B
 (1964) *Med. Clin. N. Amer.* 48, 773
 (1967) In: Lawson & Stewart (1967) p 432

Professor R R Trussell

(Department of Obstetrics & Gynaecology,
 Makerere University College Medical School,
 Kampala, Uganda)

Pelvic Inflammatory Disease

Stern (1958) states that the natural history of local pelvic infection has in recent years undergone a complete change from that found in the classical descriptions set forth by accurate observers in the past.

Modern antibiotic compounds of wide range and potency have, together with blood transfusion, contributed to effective and successful treatment in the tropics as elsewhere; however, flord infection and its sequelæ are still seen and may be compared with malaria as a major cause of acute and chronic ill health. The commonly resulting childlessness is a social tragedy in a woman in a backward society.

Any consideration of disease in the tropics must take note of cultural attitudes. When gonorrhœa was introduced into Uganda, its contraction by the ruling Monarch in Buganda in the 1870s gave it somewhat of a social cachet and sufferers were known as the 'Amazira' or the 'brave ones'. By no means confined to the tropics and dying

hard is the belief that intercourse with a virgin will cure gonorrhœa in the male.

True incidence of a disease in a tropical community is difficult to discover and, although the purpose of this paper is to illustrate a world problem, the subject matter is based on an analysis of admissions to the gynaecological wards of Mulago Hospital, the teaching hospital of the University of East Africa in Kampala, Uganda.

Outpatients: Acute and chronic infections of vagina and cervix are common and vulval sores and condylomata frequently seen. In a review of 10,000 cases examined by exfoliative cytology, a 40% incidence of vaginal infection with *Trichomonas vaginalis* was found. Acute and chronic endometritis are common and contribute substantially to the spectrum of menstrual irregularities. Every year about 12 girls are referred within the first few months of life with possible congenital anomalies of the vulva: they usually have fused labia minora as the result of infection and respond well to separation, often as outpatients. This is followed by systemic penicillin, antibiotic cream and small amounts of œstrogen. Bartholin's abscess is common and is treated by marsupialization.

Inpatients: Among 1,066 gynaecological admissions (Table 1) to Mulago Hospital in 1965 there were 234 cases of pelvic inflammatory disease. If to the patients with pelvic infections are added those with closely related ectopic gestations and infertility, the total becomes nearly half of those admitted. This is brought out in Table 2. Lym-

Table 1

Mulago Hospital 1965: Admissions to gynaecological wards

	No. of cases
Pelvic inflammatory disease	234
Uterine fibroid	232
Ectopic gestation	144
Dysfunctional uterine bleeding	124
Infertility	63
Benign ovarian neoplasm	55
Vesicovaginal fistula	53
Cancer (all sites)	67
Trauma	22
Nonmalignant disease of the cervix	18
Lymphogranuloma venereum	5
Uterovaginal prolapse	5
Pelvic tuberculosis	2
Miscellaneous	42
Total	1,066
Abortions	1,285

Table 2

Mulago Hospital 1965: Pelvic infection and related conditions

	No. of cases
Pelvic inflammatory disease	234
Ectopic gestation	144
Infertility	63
	441