The rectum as viewed by the venereologist*

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SUMMARY About 2·2½ million people do, or will repeatedly, participate in ano-rectal sexual intercourse in Britain alone. The anus and the rectum of these individuals are thus vulnerable to all the sexually transmitted diseases (except trichomoniasis). Male homosexuals appear to be more prone to these conditions than female heterosexuals, possibly because a large minority is indiscriminately promiscuous. Over the last 20 years homosexually acquired infections—particularly syphilis—have increased in Britain; these are now more readily admitted to because of changes in the law and in public opinion. The frequent changes of sexual partner among male homosexuals is the most notable epidemiological factor in the spread of venereal disease.

Introduction

The complexity and variety of the sexual act is shown in the figure. The anus and rectum of homosexual women are at little risk of venereal infection, but in some heterosexual women and nearly all homosexual men, being recipients of the male organ, the risks are much greater.

Estimates of numbers of wholly homosexual men vary, but 4·5% is a common figure.^{1,2} If related to the 27·2 million men of the 1978 population of 55·8 millions in the United Kingdom this would suggest there are at least 1·1–1·4 million British homosexual men who actually do, or are potentially likely to, use either their own rectum or that of another person for sexual gratification.

Among heterosexual men the number of rectal users is known to be high among male patients attending venereal disease clinics. In one investigation 25·34% of such patients in Chicago, USA, and Kingston, Jamaica, had had heterosexual rectal coitus at least once,³ while in a study of female gonorrhoea contacts in London 17% had had rectal coitus within the previous three months.^{4a}

Data for the population at large are more scanty, although in one study the figure of 3% has been

FIGURE Sexual behaviour

mentioned.² If a figure of 2% was applied to the 28·6 million women in the United Kingdom, 572 000 would have—or might have sometime in the future—anal intercourse. If a similar figure was applied to the remaining 25·8–26·1 million heterosexual men this would imply a further 516 000–522 000 men. Thus, if the basic assumptions are correct, this would amount to a total of 2·2½ million actual or potential rectal users in the United Kingdom. This may be regarded as the lowest estimate. In the United States the number of habitual and occasional homosexual men has been estimated at 30 million.^{4b}

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The anus and rectum might, therefore, be expected to bear the brunt of much venereal disease. Although for some years now the rectum has been officially recognised as a genital organ by the Department of Health and Social Security (which requires the statistical classification of gonococcal and nongonococcal proctitis as genital infections) an increased awareness of this possibility is nevertheless required by both the public and the medical profession.

Gonococcal infections of the rectum

WOMEN

Rectal gonorrhoea in women was described in the 1930s and was diagnosed in 30-55% of those with genital gonorrhoea⁵ by smear⁶ and also sometimes by culture.⁷ It was largely asymptomatic and persisted for some months without (and even with) some local treatments.^{6,7}

In the 1930s and 1940s the accepted mode of infection of the female rectum with gonorrhoea was secondary to genital infection,^{5,6,8} since gonococcal pus contaminated the anus and the normal eversion of the anus during defecation allowed the terminal rectum to be infected as it retracted.⁶ Other modes of infection listed by Martin in 1935 included the wearing of tight undergarments, contamination of the anus with infected urine, the partial expulsion and retraction of a faecal mass (especially in constipated women), the backflow of a vaginal douche, contamination of rectal or vaginal specula or dilators and rectal thermometers, and the insertion of a suppository with infected fingers. All of these theories preceded that of peno-anal coitus and associated rectal disease.⁶

In the early 1950s Jensen found that 40% of patients with rectal gonorrhoea questioned in Copenhagen admitted to rectal coitus⁹ and noted that a more "biological" mode of infection than those previously considered seemed "rather foreign to the Anglo-American trend of thought." This trend largely persisted through the 1960s, when it was categorically affirmed that rectal gonorrhoea in women was not due to "unnatural sexual practices"¹⁰ and has been widely prevalent until the present time.

MEN

Similarly, there was a reluctance to accept rectal infections in men, although Harkness, in 1948, had described 168 cases of primary gonococcal proctitis (the majority with few or no symptoms) resulting from sodomy, which he considered was much more frequent than generally supposed.¹¹ In the same year

Nicol stated that rectal gonorrhoea, while common in women, was rare in men⁵; three years later McLachlan affirmed that such infections in men might follow the rupture of a prostatic abscess, an abscess of Cowper's gland, or a posterior periurethral abscess, or result "less frequently from sodomy".¹²

A decade later, however, the first evidence of change occurred in the West End of London. In 1962, at the West London Hospital, 6.9% of gonococcal infections were found in homosexuals; two years later the figure had increased to 15.5% (about half being ano-rectal infections), with possible increases to come,¹³ while similar findings were noted at St Mary's Hospital.¹⁴

In a more recent study by the British Co-operative Clinical Group of 36 242 cases of gonorrhoea in 1971,¹⁵ the respective percentages of infections which were acquired in Wales, Scotland, and English clinics outside London were 4.0, 4.1, and 4.6% respectively; but higher figures of 7.7% for the London clinics outside the West End and of 27.6% for five clinics in the West End were by then apparent.

A further study of 33 826 cases in 1977¹⁶ showed 5.9% in Northern Ireland (not previously studied), 6.0% in English clinics outside London, 6.2% in Scotland, and 7.3% in Wales. In London clinics outside the West End the figure was now 8.8% and in the five West End clinics 28.7% (table I). Although only 30.4% of the total infections in Britain were treated in London (10 296 of 33 826), no less than 61.5% of the homosexually acquired infections (2266 of 3687) were encountered in the capital.

Furthermore, while there was a decrease of 2554 (7.8%) of heterosexually acquired infections between the two studies there was a rise of 138 (3.9%) of those contracted homosexually, most of which were ano-rectal infections (table II).

Syphilis and the rectum

LATE SYPHILIS

At the turn of the century syphilis was about the only venereal disease listed as affecting the rectum and then only indirectly in the rectal crises of *tabes dorsalis* and in terms of gummatous late syphilis.¹⁷ However, as the various manifestations of lymphogranuloma venereum (including inflammatory stricture of the rectum) were brought together as one entity in the mid-1930s,¹⁸ for the next decade the subject of syphilis of the rectum was confused by the expansion of knowledge of this new disease.¹⁹ It gradually became evident that practically all, if not all, of so-called tertiary syphilis of the rectum was in fact lymphogranuloma venereum, albeit occurring in patients with latent syphilitic disease.

TABLE I Homosexually acquired gonococcal infections^{15 16}

Area	1971		1977	
	Total infections	Homosexually acquired		Total infections
		No	%	
England				
50 000 or less	1102	57	5.2	1481
50 001-100 000	3379	168	5.0	4378
100 001-500 000	8852	495	5.6	9178
500 001 plus	6590	202	3.1	4168
Total outside London	19 923	922	4.6	19 205
London				
Outside West End	4823	373	7.7	3456
5 West End clinics	582	2095	27.6	6840
Total London	12 405	2468	19.9	10 296
Total England	32 328	3390	10.5	29 501
Scotland	2822	115	4.1	3478
Wales	1092	44	4.0	591
N Ireland	ND	ND	ND	256
Total Britain	36 242	3549	9.8	33 826
	(176 clinics)			(178 clinics)

ND = no data

TABLE II Homosexual infections in relation to decreased numbers of gonococcal infections^{15 16}

Type of infection	1971	1977	Difference	
			No	%*
Penile	1945	1904	- 41	
Ano-rectal	1604†	1726‡	+ 122	
Oral only	ND	57	(+ 57)	
Total homosexual	3549	3687	+ 138	+ 3.9
Total heterosexual	32 693	30 139	- 2554	- 7.8
Total cases	36 242	33 826	- 2416	- 6.7

* % of 1971 infections

† 45.2% of all homosexual infections

‡ 46.8% of homosexual infections

ND = no data

EARLY SYPHILIS

Osler, in 1897,¹⁷ while admitting that oral chancres arose as a rule from "improper practices," made no reference to rectal lesions. Stokes and his colleagues in 1945,¹⁹ however, gave an excellent description of anal chancres, "which usually resulted from pederasty," but chancres of the lip, gum, tonsil, nasal septum, finger and hand, and skin took precedence. Others considered that these usually arose from the "ordinary osculatory salute" and the "baiser d'amour".¹⁹

As with gonorrhoea, the first impact of increasing numbers of recognised ano-rectally acquired infections with syphilis was in London. Between 1932 and 1960 only 60 cases were seen in the outpatient department of St Mark's Hospital,²⁰ but within a few years in several venereal disease clinics the percentage of infections with early syphilis which were homosex-

ually acquired ranged between 14 and 79%¹⁴ with a marked recent increase in the West End.¹³

The investigations of the British Co-operative Clinical Group in 1971¹⁵ and in 1977¹⁶ also concerned primary and secondary syphilis. In 1971, when 924 such cases were studied, the percentages of infections believed to have been homosexually acquired were consistently higher than those for gonorrhoea—9.5% for Wales, 13.5% for Scotland, and 25.1% for England (excluding London), and 37.2% for London (excluding the West End) and 73.3% for the five clinics in the West End.¹⁵

By 1977, when 1363 cases were studied, the percentages of homosexually acquired infections in Wales, Northern Ireland (not previously included), and Scotland were 14.0, 22.2, and 32.4% respectively while in England alone (excluding London) (as in Scotland) it had more than doubled to 52.2% (table III). In London (excluding the West End) the figure was 37.9% and in the five West End clinics as high as 76.9%.¹⁶

The increase in homosexually acquired infections has affected all areas. Even in English towns of less than 50 000 population the percentage of homosexually acquired infections had risen from 9.5% in 1971¹⁵ to 43.5% in 1977,¹⁶ when only 46.7% of homosexually acquired infections in Britain (344 of 736) were treated in London compared with 74% (290 of 392) in 1971 (table III).

The homosexuals have made a big impact on trends. Of the increase of 439 cases between the two studies, 21.6% was accounted for by infections in heterosexuals while no less than 78.4% of the increase was due to homosexually acquired infections (table IV).

TABLE III Homosexually acquired infections with primary and secondary syphilis^{15 16}

Area	1971			1977		
	Total infections	Homosexually acquired		Total infections	Homosexually acquired	
		No	%		No	%
England						
50 000 or less	21	2	9.5	69	30	43.5
50 001-100 000	70	20	28.6	130	61	46.9
100 001-500 000	171	52	30.4	311	181	58.2
500 001 plus	101	17	16.8	157	76	48.4
Total outside London	363	91	25.1	667	348	52.2
London						
Outside West End	145	54	37.2	153	58	37.9
5 West End clinics	322	236	73.3	372	286	76.9
Total London	467	290	62.1	525	344	65.5
Total England	830	381	45.9	1192	692	58.1
Scotland	52	7	13.5	105	34	32.4
Wales	42	4	9.5	57	8	14.0
N Ireland	ND	ND	ND	9	2	22.2
Total Britain	924 (176 clinics)	392	42.4	1363 (178 clinics)	736	54.0

ND = no data

TABLE IV Homosexual infections and increased number of cases of primary and secondary syphilis^{15 16}

Type of infection	1971	1977	Increase	
			No	% *
Homosexual				
Penile	172	355	183	41.7
Ano-rectal	220†	366‡	146	33.3
Oral only	ND	15	(15)	(3.4)
Total homosexual	392	736	344	78.4
Total heterosexual	532	627	95	21.6
Total cases	924	1363	439	100.0

*% of total increase

†56.1% of all homosexual infections

‡49.7% of homosexual infections

ND = no data

Other STDs and the rectum

BACTERIAL DISEASES

Group B β -haemolytic streptococci may affect the anus and surrounding skin in both homosexuals and heterosexuals.

Ano-rectal infection with *Neisseria meningitidis* is, however, significantly more frequent in homosexual men than in heterosexual women; the more common practice of oro-anal sexual contact among male homosexuals is a likely factor.²¹

Donovanosis (granuloma inguinale) affecting the skin around the anus is nearly always a consequence of passive pederasty. In a review of 48 anal cases in 1958, 44 patients admitted to this practice.²² The causative organism, a Gram-negative bacterium, has been considered to be a faecal pathogen, which may be transferred from one individual to another but

may also result in autoinoculation of the same person if transferred from the bowel to the anal skin.²³

A higher incidence of shigellosis has been noted among those who practise oro-genital and oro-anal sex, especially homosexual men²⁴ and those who adopt so-called "alternative life styles".²⁵ Indeed typhoid fever has been reported to be transmitted in this way.²⁶

CHLAMYDIAL DISEASES

Since its first recognition as a clinical entity inflammatory stricture of the rectum due to lymphogranuloma venereum was regarded as of venereal origin; it was noted that prostitutes were particularly vulnerable, but it was at first by no means generally related to sodomy.¹⁸ Indeed, although numerous authors have emphasised the role of pederasty in this condition²² even some recent reports have been divided in this respect.²⁷ Nevertheless it has been recommended that, on the basis of a high incidence of positive results in the Frei and complement-fixation tests on patients with a present or past history of peri-rectal abscess or fistula-in-ano especially in male homosexuals, lymphogranuloma venereum must be considered in the differential diagnosis of these conditions.²⁸

Non-specific proctitis in men (usually diagnosed when pus cells but no gonococci are found in the rectum) is a relatively common condition in sexually transmitted disease clinics, although it is grouped with nongonococcal urethritis as non-specific genital infection in the official statistics. *Chlamydia trachomatis* can be isolated in some such cases,²⁹ and these infections can be considered to be common in homosexuals.

FUNGAL DISEASES

Candidosis not infrequently affects the rectum of both sexes; this does not usually result from sexual intercourse but from the taking of antibiotics. Rectal burning and irritation, the then so-called "ano-rectal syndrome," was first described after the ingestion of tetracyclines.³⁰ Moniliasis also affects the skin of the perianal region and nates.

PARASITIC DISEASES

Scabies can be contracted no less easily during homosexual than heterosexual intercourse, although pediculosis pubis would be expected to have a heterosexual bias. Infestation with threadworms (*Enterobius vermicularis*) has been described in homosexual pairs.³¹

PROTOZOAL DISEASES

The commonest sexually transmitted protozoal pathogen, *Trichomonas vaginalis*, seems not to flourish in the rectum.³² Amoebiasis, on the other hand, may be manifested by peri-anal and genital ulceration in areas where the condition is endemic.³³ It may also be passed during homosexual practices, particularly oro-anal contact,^{25 34-36} and in non-endemic areas like New York City most cases may be homosexually acquired.³⁶ Cases of giardiasis similarly transmitted have also been reported.^{24 37}

TRAUMATIC CONDITIONS

Foreign bodies no less bizarre than those occasionally found in the vagina are sometimes recovered from the rectum, and severe injuries, even fatalities, have occurred after the insertion of bottles and other hard objects.³⁸ The author's experience has mainly been associated with vegetables, including a large Spanish onion in the vagina³⁹ and a half-peeled cucumber in the rectum.³⁸

More recently, so-called "social injuries of the rectum" have included cases of mucosal laceration and bleeding, suspected intra-peritoneal perforation, and extensive injury to the sphincter resulting in complete anal incontinence, which usually occurs in more experienced homosexual men under the influence of drugs who have practised "fist fornication".⁴⁰

VIRAL DISEASES

The large majority of patients of both sexes with anal warts (condylomata acuminata) admit to anal intercourse and this association was well known in Roman times, when they were known as figs.⁴¹ As penile warts may often be found in sexual contacts of those with anal warts it has been suggested that the condition is not necessarily sexually transmitted but could conceivably result from carriage of the virus in the

intestinal tract with subsequent transfer to the anal region during anal intercourse⁴¹ in a manner similar to that suggested for granuloma inguinale.²³

The virus of herpes simplex may cause peri-anal vesicles as well as involvement of the rectal mucosa, causing severe rectal pain, tenesmus, diarrhoea, and constitutional symptoms severe enough to warrant admission to hospital.⁴² Both genital and anal herpes may occasionally result in retention of urine with localised neurological signs.⁴³

Another disease commonly transmitted by sexual intercourse is viral hepatitis. Since first reports indicating a 10-fold greater carriage rate of Australia antigen in homosexual than in heterosexual patients attending STD clinics,^{44 45} several workers have found a high percentage of homosexuals among patients with hepatitis B infections.²⁵ In parts of some cities—for example, New York—most infections with all forms of viral hepatitis in some areas are homosexually acquired.³⁶ The precise mode of infection with the hepatitis B virus in these cases remains uncertain but both men⁴⁶ and women⁴⁷ have a higher rate of detection of antigen or antibody according to the number of previous sexual partners.

Discussion

The practice of anal intercourse is of long standing. Peruvian pottery indicates that this type of activity was well known in ancient times.³ Attitudes to it have varied at different periods and in different societies, and a considerable change in attitude has occurred in recent decades.

While the very considerable increase of recognised sexually transmitted diseases which are homosexually acquired is obvious, much of it could well be due to a greater freedom of homosexuals to discuss their infections as a result of a relaxation of the laws regarding homosexuality in many countries. Just over 20 years ago, Marmell in New York City wrote, "Considering the attitude of Western civilizations towards homosexual practices, it is understandable that some patients should be unwilling to admit pederasty. Natural reticence may be involved, but fear of the police, fear of the army courts martial, fear of loss of job or prestige, fear of being branded a 'security risk,' amongst other factors, are powerful and, at times, insurmountable deterrents to an admission of homosexuality."²²

Today, with relaxation of the laws, the freedom to speak is now much greater and is indeed demanded. The term "gay bowel syndrome" has been coined for the variety of rectal conditions presenting to the proctologist including, in descending order of frequency, condylomata acuminata, haemorrhoids, non-specific proctitis, fistula, peri-rectal abscess,

anal fissure, amoebiasis, benign polyps, viral hepatitis, gonorrhoea, syphilis, ano-rectal trauma and foreign bodies, shigellosis, rectal ulcers, and lymphogranuloma venereum, which, although by no means exclusive to homosexuals, are found more frequently in this group.⁴⁸

The most notable epidemiological factor in the spread of sexually transmitted diseases among male homosexuals is the high frequency of partner change, a sizable minority of the group repeatedly making their casual contacts in parks, public toilets, baths, and other public places. A moderately active homosexual may easily have contact with 100 different partners a year,^{4b} often from a variety of different countries, both at home and abroad. In one series 30% had female contacts as well.⁴⁹

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