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## Fournier's gangrene in Ibadan

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### Summary

Twenty six patients with Fourniers gangrene seen over an 8 year period at the University College Hospital Ibadan are presented. Their ages ranged from 34years to 70years with a mean of 52.5years. Possible predisposing conditions were present in 17(65%) patients. The anterior scrotal skin alone was most commonly involved. They were treated with systemic antibiotics, wound debridement and sitz baths. While the wound healed spontaneously on this regimen in 6(23%) patients, 19(73%) patients required suture closure of their clean granulating wounds. None required rotational skin flap scrotoplasty and no deaths occurred. It is stressed that because of the independent arterial supply and venous drainage of the testes, even when the entire scrotum has sloughed, orchidectomy should never be considered a management option.

**Keywords:** *Fournier's gangrene, scrotum, tests*

### Résumé

Vingt six malades de la gangrene de Fournier ont été suivis pendant une période de 8 ans au Centre Hospitalier Universitaire d'Ibadan. Leurs âges variaient entre 34 à 70 ans avec une moyenne de 52, 5 ans. Les conditions possibles de prédisposition ont été présentes chez 17 (65%) des patients. La partie antérieure de la peau scrotale était la plus communément impliquée. Ils étaient traités avec les antibiotiques systémiques, le débridage des plaies et les bains sitz. Alors que les blessures guérissaient spontanément sur ce traitement chez 6 (23%) des malades, 19 (73%) ont eu recours à la suture de leurs blessures granuleuses. Aucun n'a eu recours au rebattage scrotoplastique rotationnel de la peau et aucun décès n'est survenu. Il est à noter qu'à cause de l'alimentation artérielle indépendante et le drainage veineux des testicules, même quand la totalité du scrotum est dégradée l'orchidectomie ne devrait jamais être considérée comme traitement optionnel.

### Introduction

Since its first description by Fournier in 1883 as characteristically having an abrupt onset in a young male subject, rapid progression to gangrene and absence of discernible cause, the syndrome now encompasses all necrotizing subcutaneous infections of the male external genitalia, both primary and those secondary to some known underlying causes [1]. Twenty six patients with Fourniers gangrene seen between 1990 and 1998 are presented to indicate how they fared in the urology unit of the University College Hospital, Ibadan, Nigeria.

### Patients and method

Twenty six patients seen at the Urology unit of the University College Hospital, Ibadan between August 1990 and July 1998 with the diagnosis of Fournier's gangrene were longitudinally studied. Their informed consents were obtained. Information obtained at presentation included their ages, the

symptom sequence and history of any predisposing conditions. They were physically examined, microbiologic swabs taken from their scrotal/penile wounds and clinical photographs of their lesions taken at presentation, when the wound becomes clean and granulating, and before discharge after the wound had healed. They were commenced on systemic gentamycin and metronidazole, their penile/scrotal wounds were debrided and sitz baths commenced. In those in whom spontaneous wound healing appeared unlikely, the edges of their clean and well granulated wounds were surgically undermined under local anaesthesia to allow for tension free delayed primary wound closure, and where tension free closure is not feasible, split thickness wound grafting was considered.

### Results

The patients' ages ranged from 34years to 70years with a mean of 52.5years. All presented with local features of scrotal pain, swelling, necrosis and sloughing with associated characteristically very foul foetid stench. Twenty one 21(81%) patients also presented with systemic features of fever and prostration. One (4%) patient had associated diabetes mellitus, 3(12%) had definite history of preceding scrotal trauma, while 2(8%) patients had anterior urethral strictures with watering can perineum. Anterior scrotal skin was involved alone in 14(53%) patients, near total scrotal skin loss with exposure of the testes occurred in 9(35%) patients, penile skin was involved in 1(4%) patient, while the posterior scrotal skin was involved alone in 2(8%) patients.

Six (23%) patients did well on systemic antibiotic, scrotal wound debridement and sitz baths with spontaneous wound healing, 19(73%) patients required suture closure of their clean granulating wounds while 1(4%) patient required split thickness skin grafting of his penile wound.

Microbiologic wound cultures yielded a wide range of bacteria including *proteus mirabilis*, *klebsiella* species, *escherichia coli*, *staphylococcus aureus*, and non-hemolytic *streptococcus faecalis* with varying sensitivities to gentamycin, ciprofloxacin, ofloxacin, streptomycin, ampicillin, and cotrimoxazole. Anaerobic cultures were not available. All the patients had mixed infections. However, clinical response to the choice of antibiotics at presentation was uniformly satisfactory and no patient required a change of antibiotics irrespective of the subsequent microbiologic antibiotic sensitivity report.

The duration of hospitalisation ranged from 35 days to 60 days with an average of 45 days. No death occurred.

### Discussion

These results further confirm that Fourniers gangrene afflicts an older age group among blacks [1, 2, 3]. The 5(19%) patients who did not have systemic manifestations at presentation had been on antibiotic treatment elsewhere before presentation. Two of these were referred because, fortunately, they had rejected the offer of bilateral orchidectomy for their hanging testicles after they had sustained near total necrosis and sloughing of the scrotum (fig 1). In these it was possible to achieve testicular coverage after undermining what was left of the scrotum (fig 2).



Sir,

## Ethnobotanical survey of plants used in the treatment of infertility and sexually transmitted diseases in southwest Nigeria

### Introduction

The use of plants as medicine, an art as old as mankind [1], still represents a very important phenomenon in traditional medicine which is an established part of the culture of inhabitants of developing countries [2,3]. Over the past decade, renewed interest in drugs of plant origin has been growing steadily, even in industrialised countries, essentially because of an increased demand for alternative medicine [1,4].

There is increasing incidence of sexually transmitted diseases (STD) and infertility in recent times. Infertility is known to be secondary to reproductive tract infections, the risk of which is increased by multiple sexual partners and septic induced abortions [4]. The acute stages of STD such as syphilis and gonorrhoea are the main cause of infertility.

This survey was initiated because we identified some acclaimed traditional healers in the target areas who treat significant number of patients with infertility and STD in their premises. Very little information is available on the medicinal plants used by these healers. This communication describes a field survey to document the plants used by the traditional healers for the treatment of STD and infertility in some local government areas of Lagos and Ogun States of Nigeria.

### Materials and methods

Field study was conducted in Ikorodu, Agege, Mushin and Eti-Osa; Sagamu, Remo and Ikenne Local Government areas of Lagos and Ogun States, respectively. The investigation was conducted by interviews and by administering pilot-tested questionnaires. Eighty informants (traditional healers and/or herb sellers) were interviewed. Information was

Table 1: Personal data on informants\*

Age		Sex	
>20	3	Male	39
21-40	30	Female	61
41-60	39		
>60	28		
Marital Status		Tribe	
Single	6	Hausa	0
Married	84	Igbo	2
Divorced	10	Yoruba	98
Religion		Years of Experience	
Christianity	8	> 5yrs	14
Islam	36	15yrs	32
Traditional	56	15yrs	54

\* = Traditional healers and/or herbersellers, n = 8  
All figures are in percentages

obtained on symptoms observed in patients with STD and infertility, the plant species and plant part(s) used, vernacular name and duration of treatment. The questionnaire also contained personal information on informants (Table 1). Assistance from the healers was also sought for the collection of the plants from the field. Correct identification was done at the Forestry Research institute of Nigeria, Ibadan (where herbarium specimens are kept) and by reference to standard botanical classifications and nomenclature [5,6,7].

### Results and Discussion

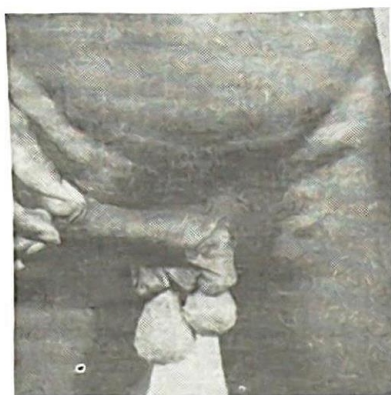
Fifty-five plant species in forty families were identified. For each species, the scientific name, family, Yoruba name and plant part used are presented. Thirty-three medicinal plants are recorded for the treatment of infertility (Table 2) while twenty-eight plants species were identified as being used for the treatment of STDs (Table 3). Six species namely *Abrus precatorius* L., *Alternanthera repens* (L.) Link, *Anthocleista djalensis* A. Chev., *Curculigo pilosa* (Schum et Thonn) Engl. *Musa paradisiaca* Walker et Sillans and *Holarrhena floribunda* (G. Don) Dur et Schniz were cited as being used for the treatment of both conditions (Tables 2 and 3) and they feature prominently in some recipes. Members of the families Euphorbiaceae, Curcubitaceae, Zingiberaceae and Rubiaceae recorded highest frequency of occurrence of plant species (9,9,7, and 6%, respectively).

In Africa, the diversity of the flora partly explains the strength of traditional medicine and the wide variety of medicinal recipes utilised by traditional healers [8]. Knowledge of the use of medicinal plants is deep-rooted in the cultural background of the people [2,9]. Very often the older people are the repositories of traditional knowledge and only after much hesitation did they give useful information about the plant. Majorities of the healers interviewed were between 41 and 60 years old, most of whom have over 15 years of experience (Table 1). About 56% of the healers were traditional religion worshippers, 36% practised Islam while only a few (8%) were Christians.

According to the healers, a male is infertile if he shows no sign of sperm production or low sperm flow during penile ejaculation while a female is considered infertile if she cannot get pregnant several months after marriage or no ovulation occurs. Symptoms observed in patients with STDs include pus or blood urine, painful urination, ulcers and itching around sexual organs. We suspect that most of the patients were suffering from gonorrhoea, syphilis or trichomoniasis. There was a general belief that infertility in women can be caused by past experiences of the woman, e.g., previous induced abortions or multiple sexual partners and womb problems. Being cursed or bewitched was also given as a reason for infertility. These findings are largely consistent with earlier report on Yoruba traditional knowledge of contraception, abortion and infertility [10]. The survey showed that treatment was mainly by administering herbs, even though sacrifices and divination were performed in some cases of infertility. The plants used



As occurs in virtually all disease states in this environment, all our patients presented late with advanced scrotal necrosis



**Fig. 1:** Fournier's gangrene: near-total scrotal skin loss with both testes hanging uncovered.



**Fig. 2:** Fournier's gangrene: covered testes after delayed primary closure in the patient shown in figure 1.

and sloughing. However in 6(23%) patients, the wound still healed spontaneously, requiring only the initial debridement, systemic antibiotics and sitz baths.

Our overall mean duration of hospital stay is less than in previous reports [1, 2, 3], probably reflecting the aggressiveness with which we perform these patients initial wound debridement. The 2(8%) patients with anterior urethral strictures and watering can perineum had suprapubic cystostomy and were subsequently readmitted for urethroplasty. No death occurred.

It cannot be overemphasised that because the arterial blood supply and venous drainage of the testes are independent of that of the scrotum, the testes are never involved in the gangrenous process and even when the entire scrotum has sloughed, orchidectomy should never be considered a management option in patients with Fournier's gangrene.

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Islam	36	15yrs	32
Traditional	56	15yrs	54

\* = Traditional healers and/or herbersellers, n = 8  
All figures are in percentages



**Table 2:** Medicinal plants used against infertility

S/No	Plants species	Family	Yoruba name	Part used
1.	<i>Abrus precatorius</i> Linn	Papilionaceae	Oju Ologbo	Leaf
2.	<i>Aframomum melegueta</i> K. Schum	Zingiberaceae	Atare	Seed
3.	<i>Altemanthera repens</i> (L.) Link	Amaranthaceae	Dagunro	Seed
4.	<i>Anthocleista djalensis</i> A. Chev.	Loganiaceae	Sapo	Leaf
5.	<i>Aristolochia albida</i> Duchante	Aristolochiaceae	Paranfunfun	Root
6.	<i>Capolobia lutea</i> G. Don	Polygalaceae	Osunsun	Leaf
7.	<i>Carica papaya</i> Linn.	Caricaceae	Ibepe	Seed
8.	<i>Cissampelos owariensis</i> P. Beauv	Menispermaceae	Jokoje	Leaf
9.	<i>Cissus populnea</i> Guill. et Perr.	Vitaceae	Ogbolo	Root
10.	<i>Citrullus colocynthis</i> (L.) Schrad	Curcubraceae	Baara	Fruit
11.	<i>Citrus aurantifolia</i> (Christm) Swingle	Rutaceae	Osan wewe	Fruit
12.	<i>Cola acuminata</i> (P. Beauv) Schott et Endl.	Sterculiaceae	Obi abata	Leaf, stem
13.	<i>Corchorus olitorius</i> Linn.	Tiliaceae	Ewedu	Leaf
14.	<i>Curculigo pilosa</i> (Schum et Thonn Engl.	Hypoxidaceae	Eepakun	Rhizome
15.	<i>Curcuma langa</i> Linn	Zingiberaceae	Atale pupa	Rhizome
16.	<i>Croton zambesicus</i> Meull. Arg.	Euphorbiaceae	Ajekofole	Stem
17.	<i>Dioda scandens</i> Swartz	Rubiaceae	Ehin aribo	Leaf
18.	<i>Ficus exasperata</i> Vahl	Moraceae	Epini	Leaf
19.	<i>Gladiolus psittacinus</i> Hook	Iridaceae	Baaka	Rhizome
20.	<i>Holarrhena floribunda</i> (G. Don) Dut et Schinz	Apocynaceae	Idagba	Leaf
21.	<i>Harungana madagascariensis</i> Lam. et Poir	Hypericaceae	Amuje	Stem bark
22.	<i>Jatropha curcas</i> Linn.	Euphorbiaceae	Iyalode	Leaf
23.	<i>Lecaniodiscus cupanioides</i> Planch et Benth	Sapindaceae	Akika	Leaf
24.	<i>Morinda lucida</i> Benth	Rubiaceae	Oruwo	Root bark
25.	<i>Morinda morindoides</i> (Bak) Milne-Redh	Rubiaceae	Paran pupa	Root
26.	<i>Musa paradisiaca</i> Walker et Sillans	Musaceae	Ogede agbagba	Fruit
27.	<i>Phyllanthus amarus</i> Schum et Thonn	Euphorbiaceae	Lowolehin	Leaf
28.	<i>Piper guineensis</i> Schum et Thonn	Piperaceae	Iyere	Fruit
29.	<i>Plumbago zeylanica</i> Linn.	Plumbaginaceae	Inabiri	Leaf
30.	<i>Portulaca oleracea</i> Linn	Portulacaceae	Papasan	Leaf
31.	<i>Secamone afzeli</i> (Schult) K. Schum	Asclepiadaceae	Ailu	Leaf
32.	<i>Sorghum bicolor</i> (L.) Moench	Graminae	Poroporo baba	Stem
33.	<i>Zee mays</i> Linn.	Graminae	Agbado	Seed

**Table 3:** Medicinal plants used against sexually transmitted diseases.

S/No	Plant species	Family	Yoruba name	Part used
1.	<i>Abrus precatorius</i> Linn.	Papilionaceae	Oju Ologbo	Leaf
2.	<i>Adenopus breviflorus</i> Benth	Curcubraceae	Tagiri	Fruit
3.	<i>Aframomum melegueta</i> K. Schum	Zingiberaceae	Atare	Fruit
4.	<i>Allium ascalonicum</i> Linn.	Liliaceae	Alubosa wewe	Whole plant
5.	<i>Altemanthera repens</i> (L.) Link	Amaranthaceae	Dagunro	Leaf
6.	<i>Anthocleista djalensis</i> A. Chev.	Loganiaceae	Sapo	Root bark
7.	<i>Blighia sapida</i> Koenig	Sapindaceae	Ishin	Leaf
8.	<i>Capsicum frutescens</i> Linn.	Solanaceae	Ata ijosi	Seed
9.	<i>Cassia alata</i> Linn.	Leguminosae	Asunwon	Leaf, root
10.	<i>Cissus populnea</i> Guill. et Perr.	Vitaceae	Ogbolo	Root
11.	<i>Citrus aurantifolia</i> (Christm) Swingle	Rutaceae	Osan wewe	Fruit
12.	<i>Citrullus colocynthis</i> (L.) Schrad	Curcubraceae	Baara	Fruit
13.	<i>Crimum jagus</i> (Thomps) Dandy	Amaryllidaceae	Ogede odo	Leaf
14.	<i>Croton penduliflorus</i> Hutch	Euphorbiaceae	Aworoso	Fruit
15.	<i>Curculigo pilosa</i> (Schum et Thonn) Engl.	Hypoxidaceae	Eepakun	Rhizome
16.	<i>Cussonia bancoensis</i> Aubrev et Pellegr.	Araliaceae	Sagere	Root
17.	<i>Entada pursaetha</i> DC	Mimosaceae	Aagba	Fruit
18.	<i>Holarrhena floribunda</i> (G. Don) Dur et Schinz	Apocynaceae	Idagba	Leaf
19.	<i>Jatropha curcas</i> Linn.	Euphorbiaceae	Botuje pupa	Leaf
20.	<i>Justica insularis</i> T. Ander	Acanthaceae	Ishope	Root bark
21.	<i>Khaya grandifoliola</i> C. DC	Meliaceae	Oganwo	Root bark
22.	<i>Momordica charantia</i> Linn.	Curcubraceae	Ejinrin	Whole plant
23.	<i>Morus mesozygia</i> Linn.	Moraceae	Aye	Root bark
24.	<i>Musa paradisiaca</i> linn.	Musaceae	Ogede agbagba	Fruit
25.	<i>Nauclea latifolia</i> SM	Rubiaceae	Egbesi	Leaf
26.	<i>Newbouldia laevis</i> (P. Beauv) ex Bureau	Seeman	Akoko	Leaf
27.	<i>Parquetina nigrescens</i> (Afz) Bullock	Periplocaceae	Ewe ogbo	Root
28.	<i>Sansevieria liberica</i> Ger et Labr.	Agavaceae	Ojakoko	Root bark



grow wild, some are easily found around houses and a few are cultivated both for food and medicine in domestic gardens.

Field study of plants and their specific uses eliminates random collection from the rich plant resources of Nigeria, which has great potential for pharmaceutical utilisation [11,12]. Information on the uses of medicinal plants by traditional healers is an important phase in the identification, screening and subsequent isolation of biologically active compounds from plants. Medicinal plants are important and indispensable tools in traditional medicine, which remains a major system of health care delivery in many developing countries [8,13] despite the scientific advances in the biomedical field.

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