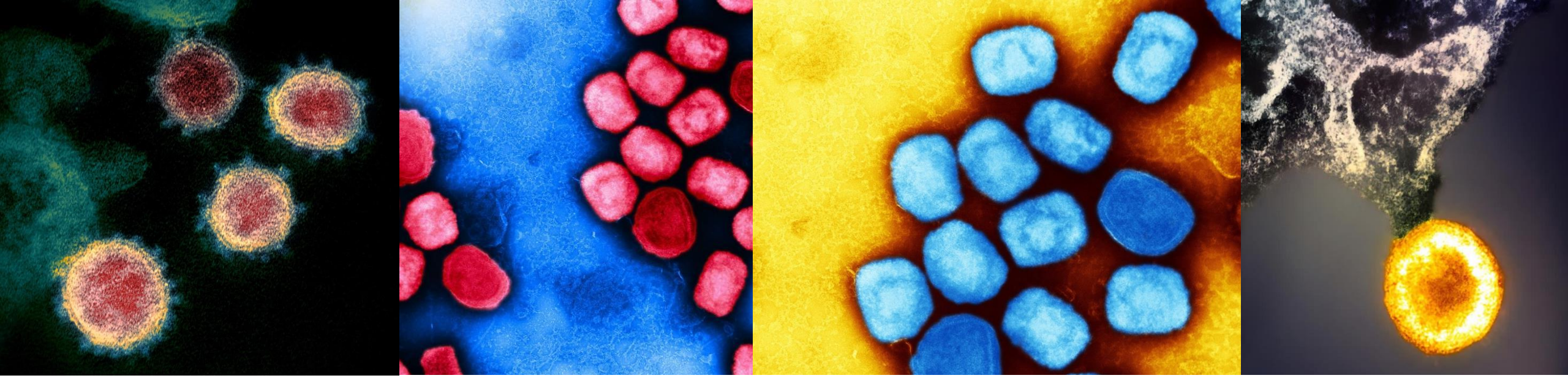




Manifestations cutanées des infections virales

Séminaire de DES-C de Maladies Infectieuses et Tropicales
Thématique n°9 – Infections cutanées et maladies d'inoculation

Octobre 2026

HSV : primo-infection

Coll. O. Chosidow



HSV-2



Traitement chez l'immunocompétent et l'immunodéprimé :
valaciclovir 500 mg à 1000 mg 2 fois par jour
pendant 7 à 10 jours

Lésions cliniques :

- Incubation : 5 à 7 jours
- Lésions papuleuses puis vésiculeuses érythémateuses
 - Regroupées en bouquet
 - D'âge différent
 - Évoluant vers des ulcérations
 - Puis des croûtes
- Douleurs à type de brûlures, prurit
- Adénopathies centimétriques douloureuses

Topographie :

- Gingivo-stomatite (enfants surtout)
- Kérato-conjonctivite
- Panaris
- Lésions génitales :
 - Vulvo-vaginite érosive (femme)
 - Érosions péniennes (hommes)
 - Ano-rectite

Evolution : guérison en 2 à 3 semaines

HSV : récurrences

Prévalence des récurrences :

- HSV-1 : 20-50%
- HSV-2 : 70-90%

Facteurs déclenchants : stress, infections, soleil, menstruations

Clinique :

- Prodromes (picotements, brûlures, paresthésies, prurit)
- État général conservé
- Lésions limitées

Evolution : cicatrisation en 7-10 jours



Traitement : valaciclovir
1000 mg 1 fois par jour
pendant 5 jours

Quelle prévention des récidives ?



Suppressive therapy reduces frequency of genital herpes recurrences by 70%–80% among patients who have frequent recurrences (469–472). Persons receiving such therapy often report having experienced no symptomatic outbreaks. Suppressive therapy also is effective for patients with less frequent recurrences. Long-term safety and efficacy have been documented among patients receiving daily acyclovir, valacyclovir, and famciclovir (474). Quality of life is improved for many patients with frequent recurrences who receive suppressive therapy rather than episodic treatment (475). Providers should discuss with patients on an annual basis whether they want to continue suppressive therapy because frequency of genital HSV-2 recurrence diminishes over time for many persons. However, neither treatment discontinuation nor laboratory monitoring is necessary because adverse events and development of HSV antiviral resistance related to long-term antiviral use are uncommon.

Recommended Regimens

Acyclovir 400 mg orally 2 times/day
OR
Valacyclovir 500 mg orally once a day*
OR
Valacyclovir 1 gm orally once a day
OR
Famciclovir 250 mg orally 2 times/day

* Valacyclovir 500 mg once a day might be less effective than other valacyclovir or acyclovir dosing regimens for persons who have frequent recurrences (i.e., ≥ 10 episodes/year).

**Si au moins 6
récurrences
par an**

HSV : érythème polymorphe (1/4)



The diagnosis is in the rings

Saskia Ingen-Housz-Oro *dermatologist*^{1 2 5}, Nicolas Ortonne *professor of pathology*^{3 4}, Olivier Chosidow *professor of dermatology*^{1 2 3 5}

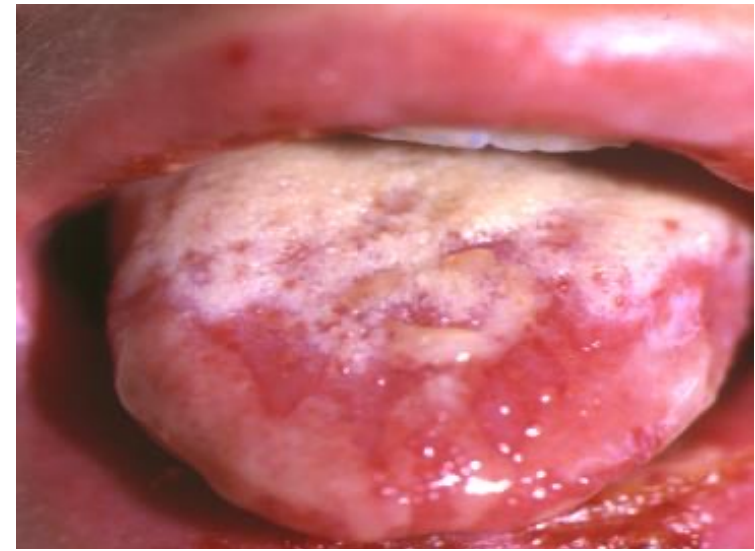


L'érythème polymorphe est une **maladie d'hypersensibilité** induisant sur la **peau +/- les muqueuses** des lésions caractéristiques : les **cocardes**. Les étiologies sont essentiellement infectieuses (**HSV, mycoplasme**, autres), mais **idiopathique** fréquemment. Entité clairement séparée du spectre « syndrome de Stevens-Johnson-Lyell ». Les **récidives** sont fréquentes.

- Élément arrondi fait typiquement de trois zones annulaires concentriques : centrale vésiculo-bulleuse, moyenne claire, périphérique rouge sombre
- Topographie : typiquement **acrale**, parfois diffuse
- Atteinte muqueuse : érosions
 - Buccales : palais, face interne des joues, langue, souvent recouvertes d'un enduit fibrineux, croûtes labiales
 - ORL : pharynx, larynx, œsophage
 - Oculaires : conjonctives, cornée
 - Génitale et anale
 - Risque de **séquelles sténosantes**

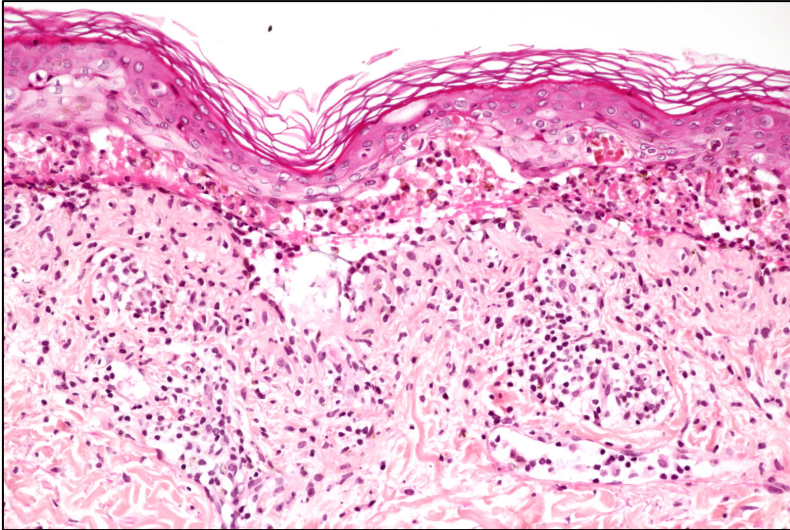
HSV : érythème polymorphe (2/4)

Coll. O. Chosidow

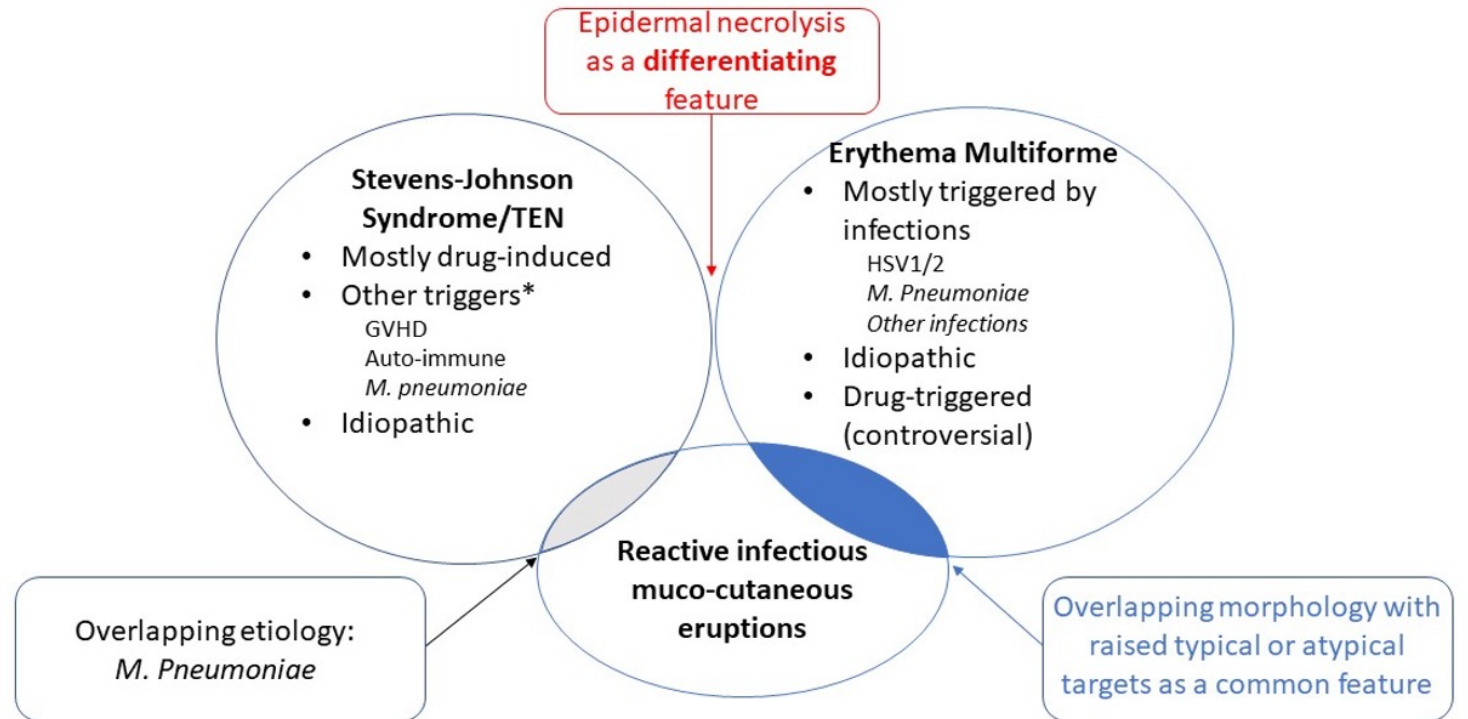


HSV : érythème polymorphe (3/4)

Quelle physiopathologie ?



- Surtout étudiée pour l'EP post-herpétique
- **Terrain génétique favorisant** : HLA DQw3/HLA B1*0301
- **Maladie immunologique** : réaction immunologique cellulaire T et cytokinique contre les antigènes viraux, à l'origine des lésions cutanées

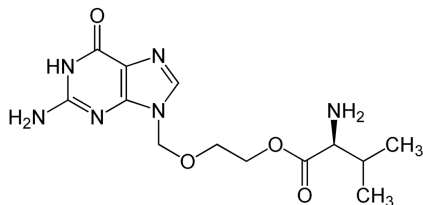
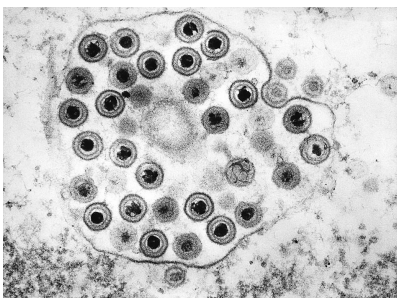


**Drugs may act as a cofactor*

HSV : érythème polymorphe (4/4)

Quelles particularités pour l'érythème polymorphe associé à HSV ?

- HSV est la **cause la plus fréquente** (30-50% des EP)
- **HSV-1** beaucoup plus que HSV-2
- EP mineurs et majeurs / graves et non graves
- Survenue en moyenne **7 à 10 jours après la poussée** d'herpès
- Souvent : poussée d'herpès infraclinique (excrétion asymptomatique) – intérêt de la **sérologie** herpès (VPN)
- Dans les formes récidivantes, l'efficacité des antiviraux prouve *a posteriori* l'origine herpétique



Traitement de la poussée :

- Essentiellement symptomatique (antalgiques)
- Lésions cutanées : abstention ou dermocorticoïdes de classe III/IV
- Lésions muqueuses : soins oculaires (vitamine A, collyres mouillants) / soins de bouche (bains de bouche antiseptiques et antalgiques, corticoïdes, vaseline) / soins génitaux (vaseline)
- Réhydratation, alimentation entérale si besoin
- **Pas d'intérêt des antiviraux en curatif**

Traitement des récidives :

- Première ligne : **prophylaxie anti-herpétique** (même en l'absence de lésion visible) par valaciclovir 500 mg x 2/jour
- A partir de 3 récidives : discuter thalidomide 50 à 100 mg/jour avec surveillance et précautions d'usage

Poxviridae

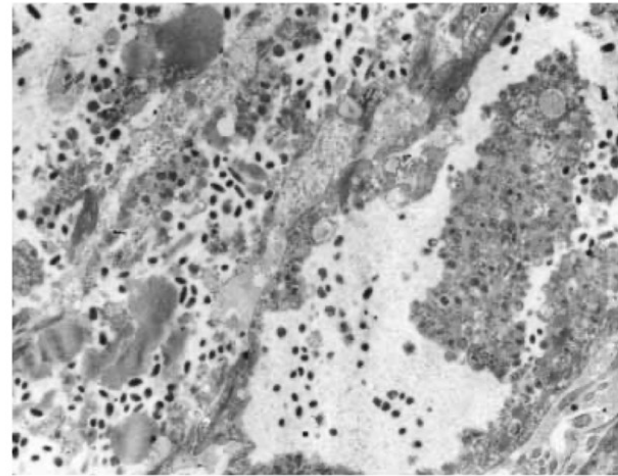
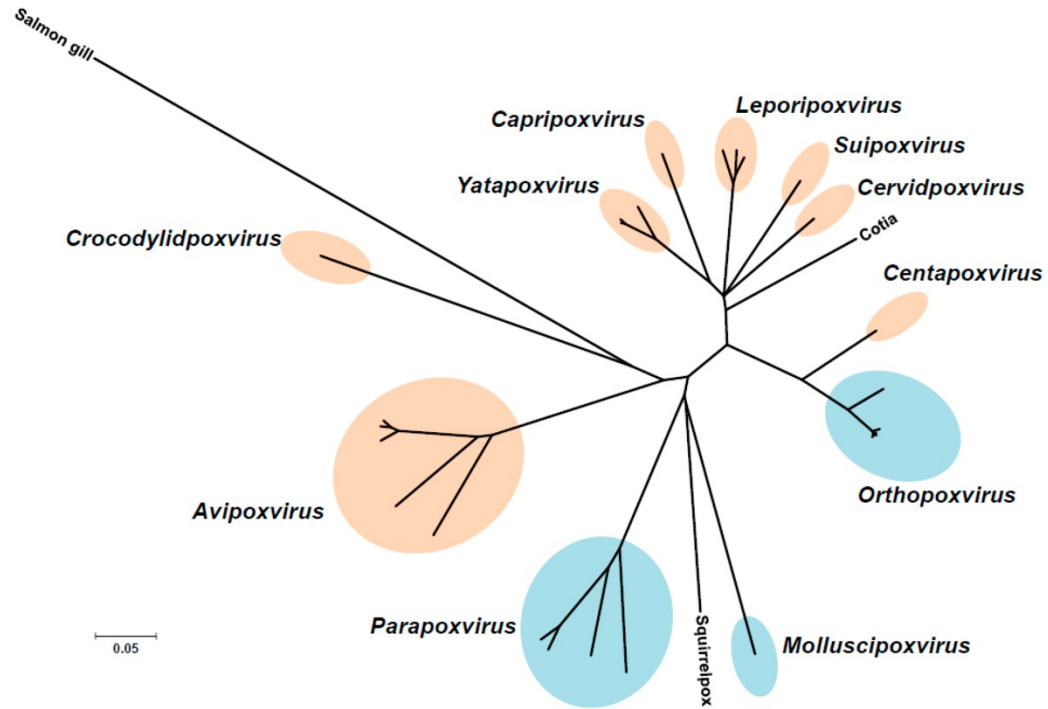


Fig 1. Poxvirus (orf): Brick-shaped to oval virus particles are seen in the vacuolated keratinocyte cytoplasm. (Original magnification $\times 20,160$.) (Courtesy of R. L. Sanchez, MD, Galveston, Tex.)

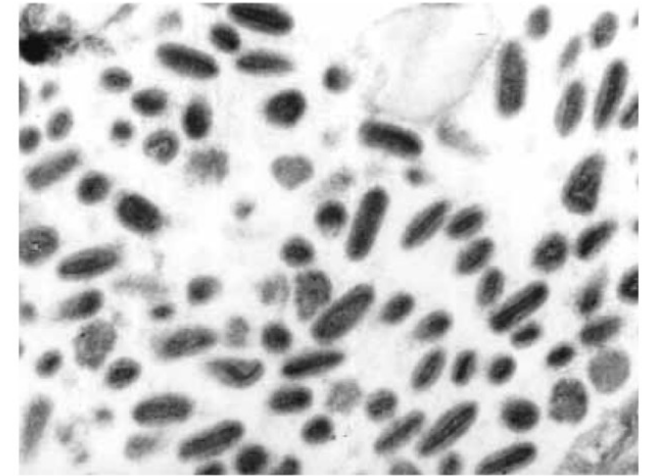


Fig 2. Viral particles with electron-dense DNA core and visible outer membrane. (Original magnification $\times 93,128$.) (Courtesy of R. L. Sanchez, MD, Galveston, Tex.)

- **Variole** : smallpox virus (VARV)
- **Vaccine** : virus de la vaccine (VACV)
- **Cowpox** : cowpox virus (CPV)
- **Monkeypox** : monkeypox virus (MKPV)

Gros virus (300 nm), ADN bicaténaire, réplication intra-cytoplasmique, 2 enveloppes

Mpox : épidémiologie



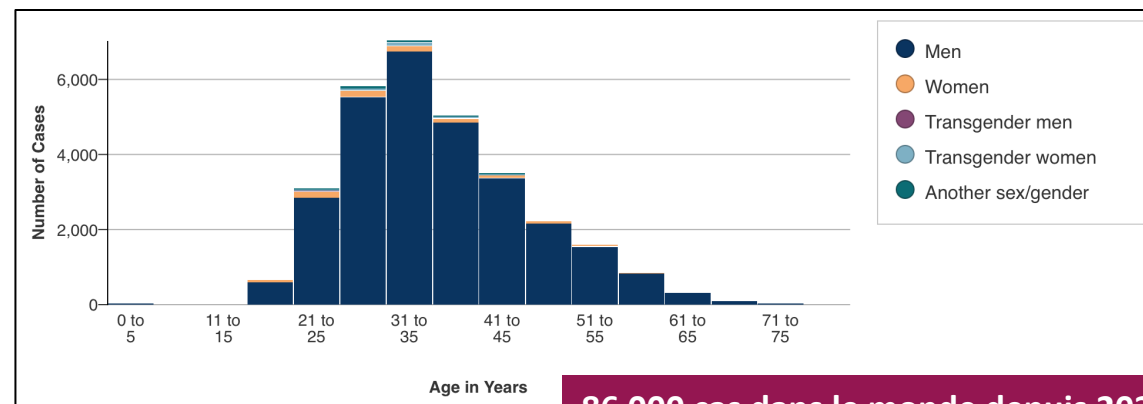
The NEW ENGLAND
JOURNAL of MEDICINE

Monkeypox Virus Infection in Humans across 16 Countries — April–June 2022

Table 1. Demographic and Clinical Characteristics of the Persons with Monkeypox.*

Characteristic	All Persons (N = 528)
Median age (range) — yr	38 (18–68)
Sex or gender — no. (%)	
Male	527 (>99)
Female	0
Trans or nonbinary	1 (<1)
Sexual orientation — no. (%)†	
Heterosexual	9 (2)
Homosexual	509 (96)
Bisexual	10 (2)
Race or ethnic group — no. (%)†	
White	398 (75)
Black	25 (5)
Mixed race	19 (4)
Latinx	66 (12)
Other or unknown	20 (4)
HIV positive — no. (%)	218 (41)
HIV negative or status unknown — no. (%)	310 (59)
Use of preexposure prophylaxis against HIV — no./total no. (%)	176/310 (57)

- 99% d'hommes, dont 98% de **HSH**
- **PVVIH** : 41% / séronégatifs sous **PrEP** : 33%
- IST concomitante : 29%
- Participation à un évènement communautaire festif sexuel : 32%

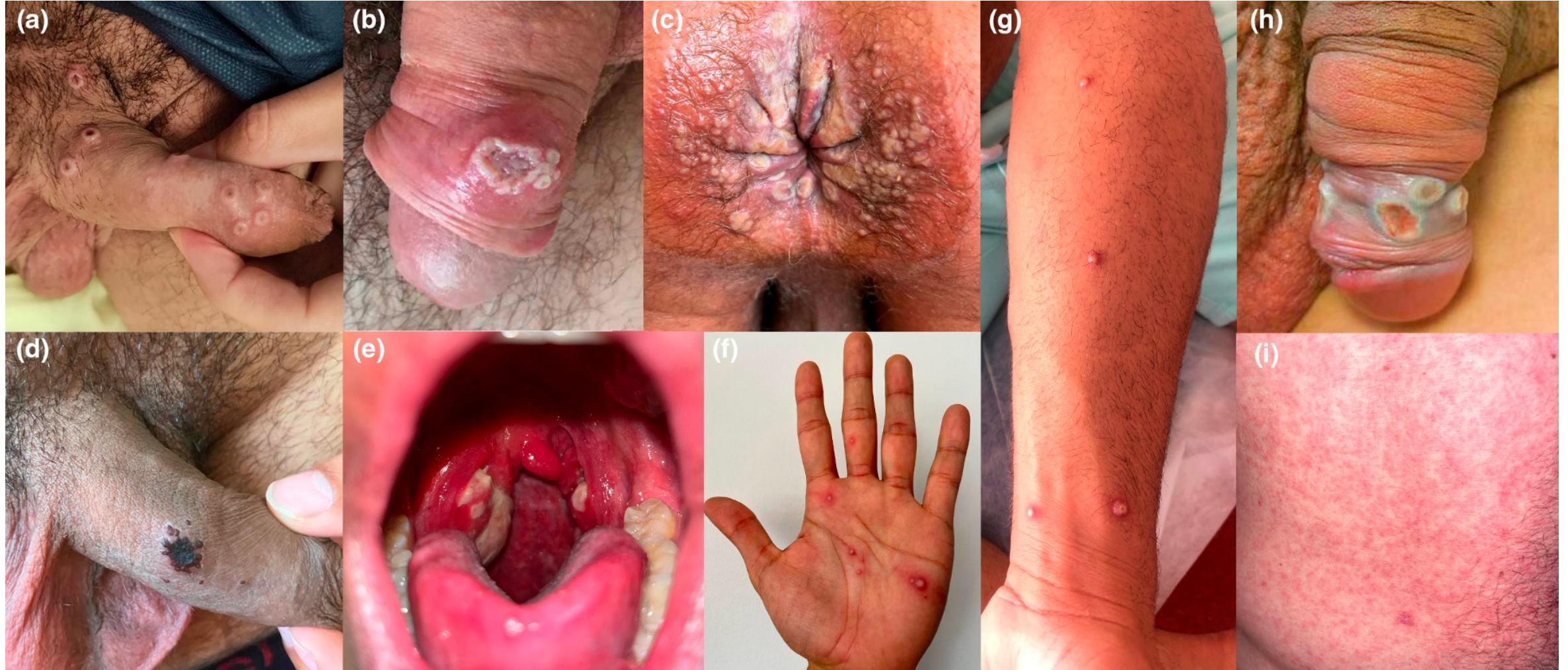


86 000 cas dans le monde depuis 2022

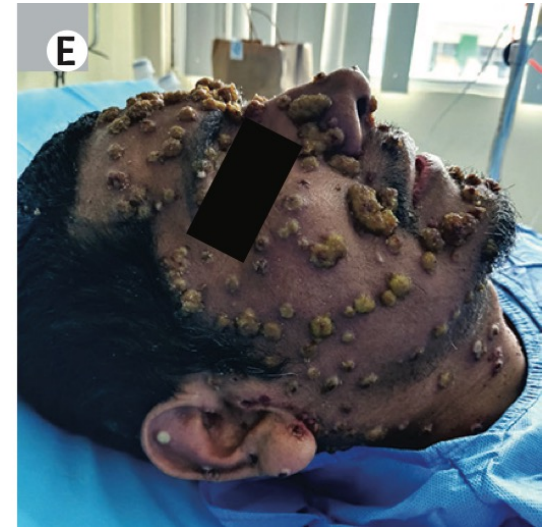
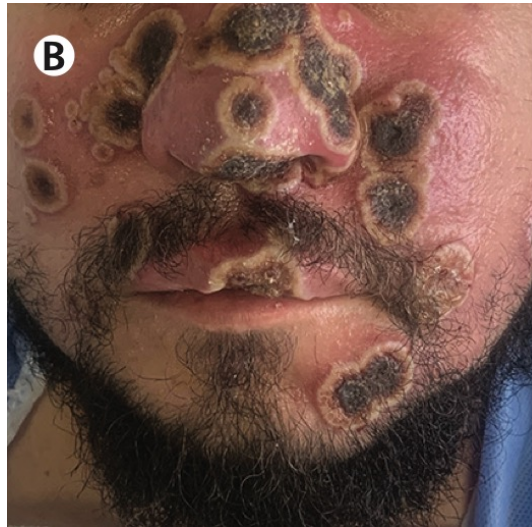
Quasiment que des hommes jeunes

Orkin, NEJM, 2022 / données CDC, 2023

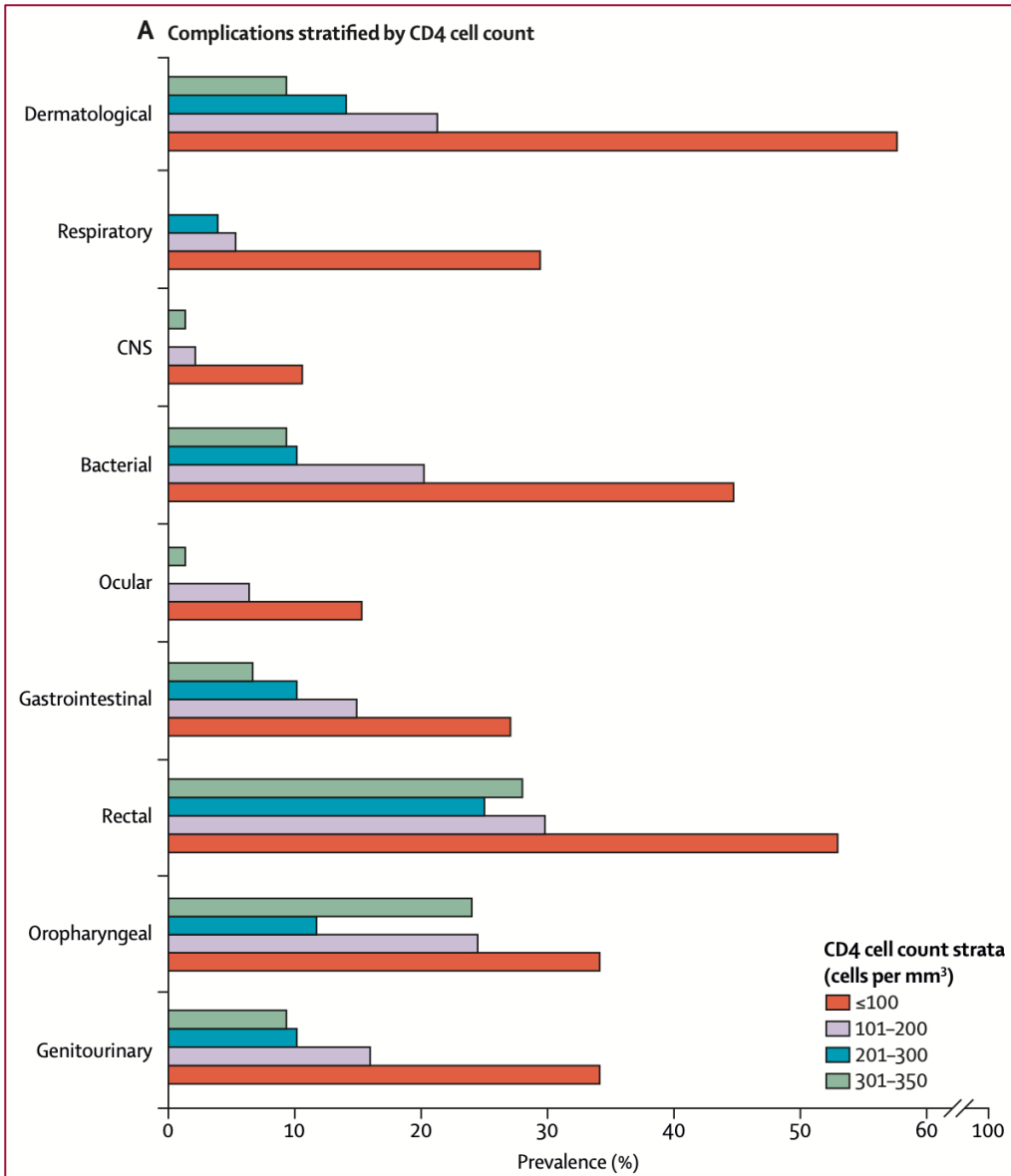
Mpox : lésions cliniques (1/2)



Mpox : lésions cliniques (2/2)

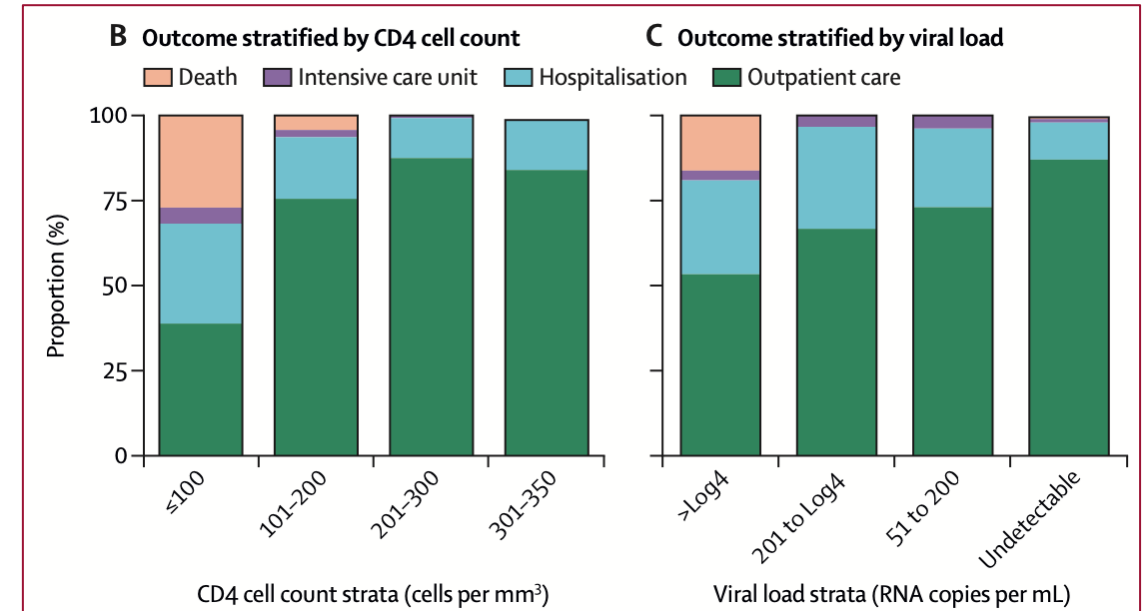


Mpox : formes graves de l'immunodéprimé



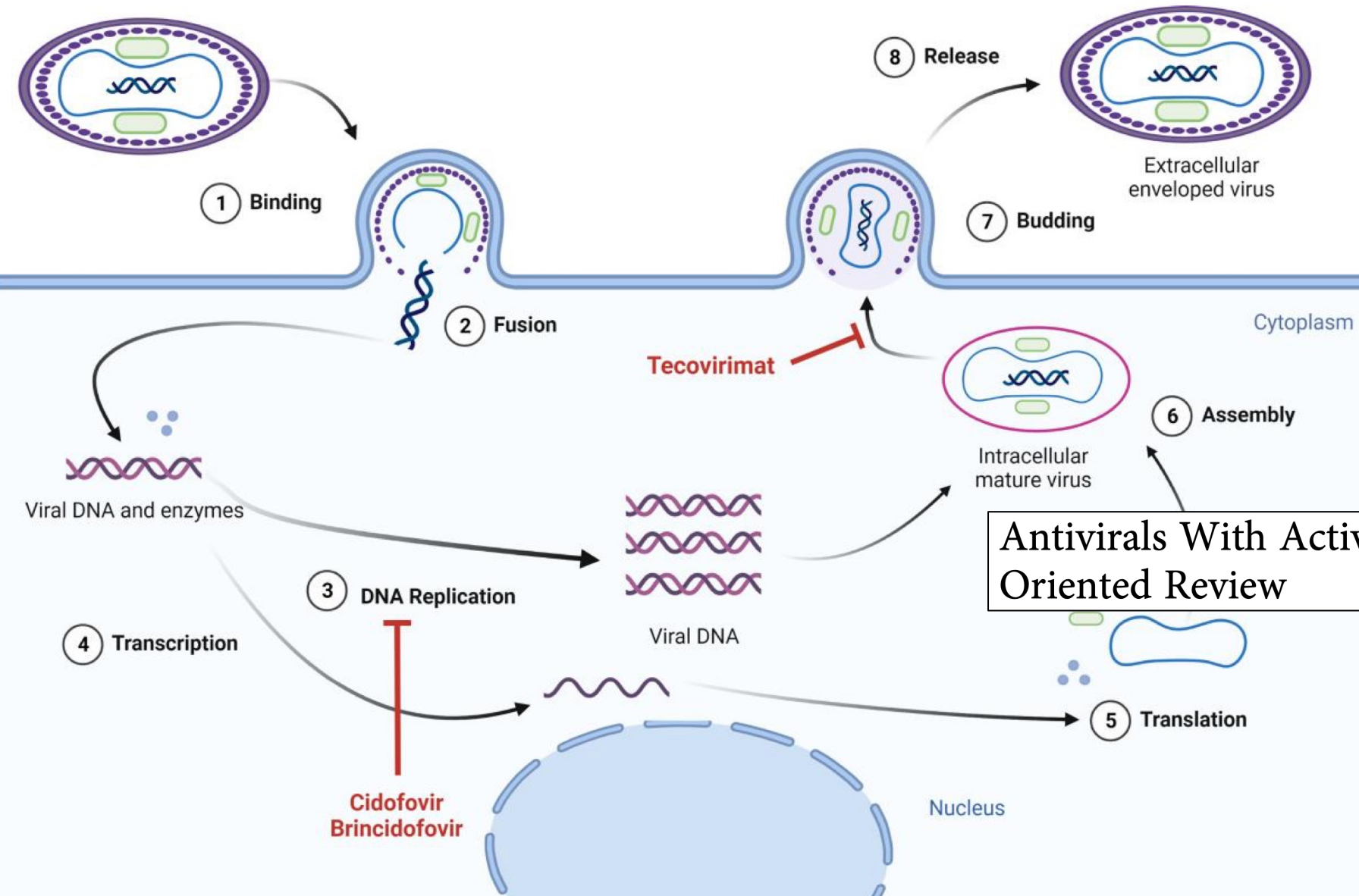
THE LANCET

Mpox in people with advanced HIV infection: a global case series



- 382 PVVIH avec CD4 <350/mm³
- Complications plus fréquentes chez les PVVIH avec des CD4 très bas, 107 hospitalisations (27%) et parmi ces patients, 27 décès, tous en cas de CD4 <200/mm³

Traitement des poxviroses



Clinical Infectious Diseases

REVIEW ARTICLE

Antivirals With Activity Against Mpox: A Clinically Oriented Review

Molluscum contagiosum (1/2)

Transmission :

- Réservoir humain, transmission interhumaine
- 4 sous-types :
 - Type I, le plus fréquent (98%), distribution Mondiale
 - Type II, le plus fréquent chez les PVVIH
 - Types III et IV, en Asie, Australie
- Fréquent chez les enfants et les immunodéprimés
- Foyers / cluster de cas sporadiques
- Temps d'incubation : 0,5 à 6 mois

Présentation clinique :

- Papule translucide ou de couleur chair
 - Hémisphérique, ferme, surface lisse
 - 3 à 5 mm de diamètre
 - Ombilication évocatrice
 - Substance blanche, crémeuse
- Distribution fréquente (>20%) : tête, tronc, membres inférieurs
- Moins de 20 lésions chez l'immunocompétent
- Formes profuses / pseudo-tumorales chez l'immunodéprimé



Molluscum contagiosum (2/2)



Forme disséminée de
l'immunodéprimé



Forme pseudo-tumorale
de l'immunodéprimé



Coll. G. Bohelay



EBV et éruption cutanée (1/3)

HYPERSENSITIVITY REACTIONS TO ANTIBACTERIAL DRUGS IN INFECTIOUS MONONUCLEOSIS

PRESENTING SYMPTOMS IN PATIENTS WITH INFECTIOUS MONONUCLEOSIS

—	No.	%
Sex:		
Male	83	45
Female	101	55
Main symptoms:		
Malaise	182	99.5
Sore throat	129	70
Swollen glands	64	35
Other features:		
Enlargement of posterior cervical glands	171	93
Pharyngitis	158	86
Fever	148	80
Axillary and/or groin lymphadenopathy	105	57
Splenomegaly	103	56
Tonsillar exudate	69	37.5
Hepatomegaly	65	35
Jaundice	14	8

1967

Antibacterial drugs had been administered to 121 patients (66%) before admission. Penicillin alone, usually as phenoxymethylpenicillin, had been administered to 67 (36%), ampicillin alone to 19 (10%), and tetracycline alone to 17 (9%). 18 patients (10%) had received two antibacterial drugs, the most frequent combination being penicillin and tetracycline.

Rashes occurred in 64 patients (35%). This total included 10 of the 63 patients (16%) who had not received antibacterial drugs and 54 of the 121 patients (45%) who had received antibacterial drugs. Rashes were most frequent (95%) in the 19 patients who received ampicillin. In this group the rash was invariably extensive, maculopapular, pruritic, and accompanied by slight or moderate pyrexia. It appeared usually seven to ten days after the patient had started ampicillin and the drug had usually been discontinued for a few days before the rash disappeared. The rash persisted for a variable period but had cleared by the end of a week, although staining and desquamation often persisted for several days more. In a few cases the rash was accompanied by other features of hypersensitivity, such as diarrhoea, arthralgia, and oedema of the face and extremities. The total dose of ampicillin varied from 2–10 g., but only 3 of the 18 who

2010

CLINICAL PRACTICE

Infectious Mononucleosis

test or culture in a patient with infectious mononucleosis may indicate colonization. Morbilliform rashes are common in patients with infectious mononucleosis treated with amoxicillin or ampicillin (occurring in up to 95% of patients with such drug exposure) and other β -lactam antibiotics (40 to 60%); this should be taken into account when considering which antibiotic to administer in patients with possible infectious mononucleosis.

EBV et éruption cutanée (2/3)



THE ANNALS OF
PHARMACOTHERAPY

A Review of Antibiotic-Induced Rash in Patients With Infectious Mononucleosis

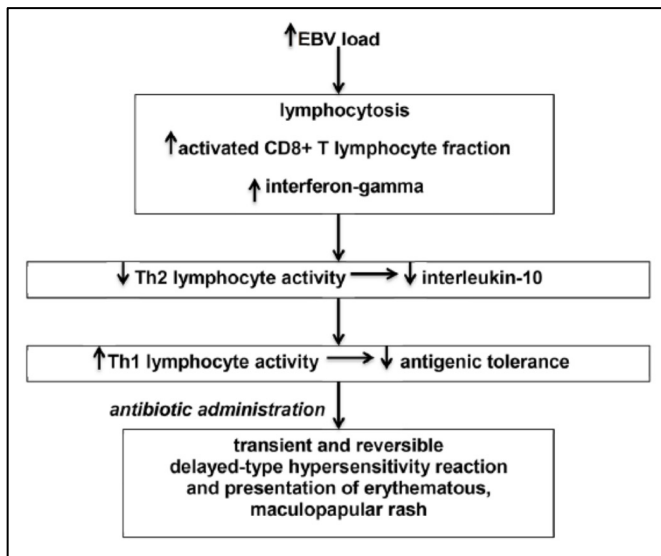
Table 3. Retrospective Studies of Rates of Antibiotic Skin Rash Associated With Infectious Mononucleosis.

Author (Year)	No. of Patients	Antibiotics Implicated	Total Number of Skin Rashes (%)	A. Skin Rashes in Patients With Antibiotics (%)	B. Skin Rashes in Patients Without Antibiotics (%)	Ampicillin Rash (%)	Effect Size (A – B)
Patel (1967) ⁷	38	Ampicillin, penicillin G, cloxacillin, or tetracycline	16/38 (42%)	15/27 (55.6%)	1/11 (9%)	13/13 (100%)	47% ^a
Pullen et al (1967) ⁸	184	Ampicillin, penicillin, tetracycline	64/184 (35%)	54/121 (45%)	10/63 (16%)	18/19 (95%)	29% ^b
Brown and Kanwar (1967) ⁹	150	Ampicillin	45/150 30%	42/126 (33%)	3/24 (13%)	20/29 (69%)	20% ^c
Davis (1972) ³⁵	205	Penicillin, ampicillin, other antibiotics	21/205 (10%)	21/141 (15%)	0/64 (0%)	19/45 (42%)	15% ^a
Chovel-Sella et al (2013) ¹²	238	Amoxicillin, cephalosporins, penicillin, macrolides	72/238 (30%)	57/173 (33%)	15/65 (23%)		10% ^d
Hocqueloux et al (2013) ¹¹	184	Penicillin, ampicillin, other antibiotics	34/184 (18%)	16/103 (15%)	18/81 (22%)		–7% ^e
Totals	999		252/999 (25.2%)	205/691 (30%)	47/308 (15%)	70/106 (66%)	15% ^b

EBV et éruption cutanée (3/3)

THE ANNALS OF
PHARMACOTHERAPY

A Review of Antibiotic-Induced Rash in Patients With Infectious Mononucleosis



**Hypersensibilité
transitoire donc
PAS de contre-
indication des
pénicillines**

- Physiopathologie mal comprise
- Hypothèse : **modification transitoire des réponses immunitaires cellulaires**, avec diminution de la tolérance antigénique, engendrant une **réaction d'hypersensibilité** à l'antibiotique



ALLERGY, ASTHMA & CLINICAL
IMMUNOLOGY

Amoxicillin rash in patients with infectious mononucleosis: evidence of true drug sensitization



Figure 1 Amoxicillin rash in a patient with infectious mononucleosis (patient 4). The cutaneous eruptions developed a few days after the initiation of the antibiotic therapy. In severe cases the progressive maculopapular exanthems turn into erythroderma.



Figure 2 Positive cutaneous response (Penicillin allergenic determinants (DAP) * test). The *in vivo* cutaneous investigation was continued with intradermal testing, if the prick tests resulted in negative response at different dilutions. Skin tests were performed using penicillin's main antigens, *major determinants and* (PPL) and *minor determinant mix* (MDM). Cutaneous tests were started with major determinants, the negative control was saline solution. In this case we recognized positive skin reaction to MDM at 1:100 and 1:10 dilutions, which verified the development of sensitization (patient 4).

Arboviroses : éruption(s) cutanée(s)

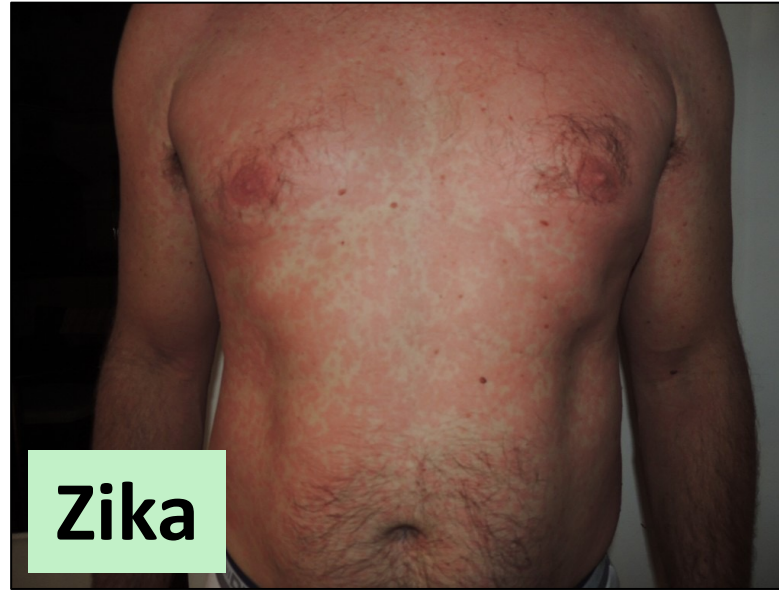


Table 1 Clinical manifestations of dengue, Zika, and chikungunya

	Dengue	Zika	Chikungunya
Incubation period	5–8 days	3–14 days	1–12 days
Frequency of symptoms	~10% of infected patients.	~20% of infected patients.	~85% of infected patients.
Skin manifestations	- Facial, neck, and trunk flushing. - Morbilliform rash. - <i>Hemorrhagic manifestations:</i> petechiae and ecchymoses.	- Maculopapular rash involving trunk, face, palms and soles. - <i>Highly pruritic.</i>	- Maculopapular rash involving trunk and limbs. - May be pruritic. - <i>Centro facial hyperpigmentation of the skin (Chik sign)</i>
Other important manifestations of disease	- High fevers (up to 40 °C). - Retro-orbital pain. - Nausea and vomiting.	- Non-purulent conjunctivitis. - Guillain-Barré Syndrome. - Microcephaly in neonates.	- High fevers (39–40 °C). - Severe polyarthralgia.

Current Tropical Medicine Reports

Arbovirus Rash in the Febrile Returning Traveler as a Diagnostic Clue

Maladie de Kaposi épidémique

CENTERS FOR DISEASE CONTROL

July 3, 1981 / Vol. 30 / No. 25

MMWR

MORBIDITY AND MORTALITY WEEKLY REPORT

Epidemiologic Notes and Reports

- 305 Kaposi's Sarcoma and *Pneumocystis* Pneumonia Among Homosexual Men — New York City and California
- 308 Cutaneous Larva Migrans in American Tourists — Martinique and Mexico
- 314 Measles — U.S. Military

Epidemiologic Notes and Reports

Kaposi's Sarcoma and *Pneumocystis* Pneumonia Among Homosexual Men — New York City and California

During the past 30 months, Kaposi's sarcoma (KS), an uncommonly reported malignancy in the United States, has been diagnosed in 26 homosexual men (20 in New York City [NYC], 6 in California). The 26 patients range in age from 26-51 years (mean 39 years). Eight of these patients died (7 in NYC, 1 in California)—all 8 within 24 months after KS was diagnosed. The diagnoses in all 26 cases were based on histopathological examination of skin lesions, lymph nodes, or tumor in other organs. Twenty-five of the 26 patients were white, 1 was black. Presenting complaints from 20 of these patients are shown in Table 1.

Skin or mucous membrane lesions, often dark blue to violaceous plaques or nodules, were present in most of the patients on their initial physician visit. However, these lesions were not always present and often were considered benign by the patient and his physician.

A review of the New York University Coordinated Cancer Registry for KS in men under age 50 revealed no cases from 1970-1979 at Bellevue Hospital and 3 cases in this age group at the New York University Hospital from 1961-1979.

Seven KS patients had serious infections diagnosed after their initial physician visit. Six patients had pneumonia (4 biopsy confirmed as due to *Pneumocystis carinii* [PC]), and one had necrotizing toxoplasmosis of the central nervous system. One of the patients with *Pneumocystis* pneumonia also experienced severe, recurrent, herpes simplex infection; extensive candidiasis; and cryptococcal meningitis. The results of tests for cytomegalovirus (CMV) infection were available for 12 patients. All 12 had serological evidence of past or present CMV infection. In 3 patients for whom culture results were available, CMV was isolated from blood, urine and/or lung of all 3. Past infections with amebiasis and hepatitis were commonly reported.

1981-1983

4 F • MARDI 17 MAI 1983 • Nlle Série • N° 619

Libération

Un virus isolé par des chercheurs français

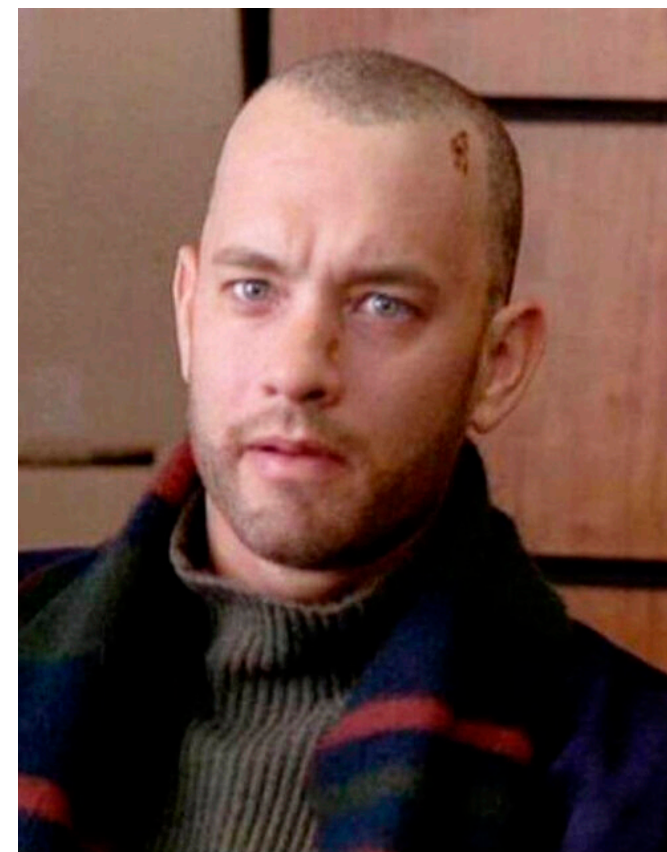
«CANCER GAY»

LA CONTAGION

PAR LE SANG

Les chercheurs de l'Institut Pasteur ont isolé sur un sujet apparemment sain un virus qui, en s'attaquant aux défenses immunitaires de l'organisme, pourrait être le responsable de l'AIDS, plus connu sous le nom de « cancer des homosexuels » dont la transmission se ferait par le sang. Lire pages 2 à 4

PHILADELPHIA



Maladie de Kaposi : lésions cutanées (1/2)

- L'atteinte cutanée est de loin la plus fréquente chez l'adulte
- Lésion élémentaire : macule qui évolue vers une papule, un nodule, une plaque, voire une lésion tumorale



- Lésions bien limitées, angiomateuses, érythémateuses puis violines, indolores, non prurigineuses, de nombre et taille variables, disposées sur le tronc en « arbre de Noël » ou limitées à une extrémité de membre
- Lésions angiomateuses parfois entourées d'un halo verdâtre ecchymotique lors des périodes de croissance de la lésion

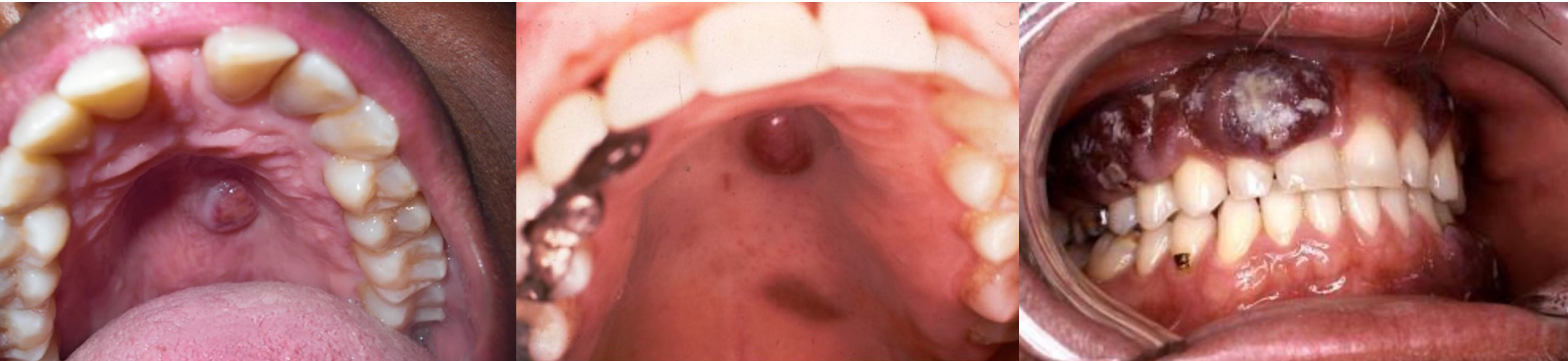
Maladie de Kaposi : lésions cutanées (2/2)

- Association, en particulier au niveau des membres inférieurs, à un œdème lymphatique qui apparaît habituellement après plusieurs mois d'évolution, réalisant d'abord un lymphoedème puis un éléphantiasis
- Les formes potentiellement sévères sont celles touchant le visage, les extrémités proximales et distales des membres (surtout inférieurs)



Maladie de Kaposi : autres atteintes

- Localisation très classique : impératif de pratiquer un examen endobuccal des PVVIH, *a fortiori* fortement immunodéprimées
- Lésion planes ou nodulaires, tumorales



Coll. G. Monsel

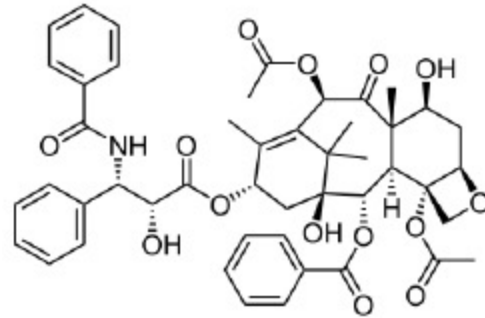
**Bilan d'extension systématique :
recherche de **lésions viscérales**
(poumon, tube digestif, ganglions)**

Maladie de Kaposi : stratégie thérapeutique

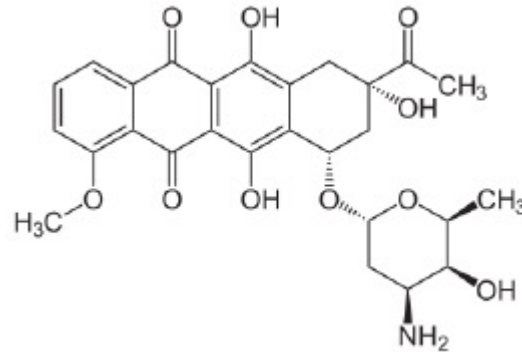
Le traitement repose avant toute chose sur la **restauration immunitaire** (traitement antirétroviral chez les PVVIH).

L'**aspect des lésions cutanéomuqueuses** et l'association avec des **atteintes viscérales** conditionnent la réalisation d'une chimiothérapie.

Anthracyclines liposomales



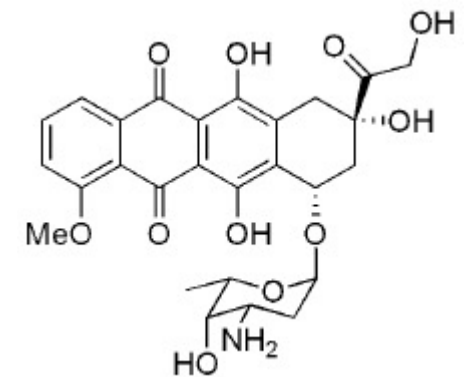
**Daunorubicine
(DAUNOXOME)**
40 mg/m² toutes
les 2 semaines



**Doxorubicine
(CAELYX)**
20 mg/m² toutes
les 2-3 semaines

FEVG >45% à J0, à contrôler après 6 cures
Dose cumulée maximale : 550 mg/m²
Erythro-dysesthésie palmo-plantaire
Toxicité médullaire

Taxanes



**Paclitaxel
(TAXOL)**
100 mg/m² toutes
les 2 semaines

Toxicité neurologique
Toxicité médullaire
Alopécie
Atteinte unguéale

Merci pour votre attention !