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CORRESPONDENCE

Case report: clinical presentation of Monkeypox in pregnancy

Caso clínico: presentación de un caso de viruela del mono en el embarazo

Dear Director:

Monkeypox (mpox) is a zoonosis caused by a virus of the orthopoxvirus family, which was first described in Central Africa in 1970.[1] Since the first autonomous cases reported by the United Kingdom Health Security Agency (UKHSA) in May 2022,[2] outbreaks appeared and spread across Europe, and worldwide.[3] By July 2023, 113 countries had reported approximately 88,600 cases and 152 deaths.[4]

Although the number of infected pregnant women is very low, they require close attention due to their increased risk of severe outcomes.[5] There is little information on clinical features, vertical transmission, and maternal and fetal complications in cases of mpox infection during pregnancy.[6] In the Democratic Republic of the Congo, between March 2007 and July 2011, four pregnant women with laboratory-confirmed mpox virus were reported. Of these, two had miscarriages in the first trimester, and one had fetal death.[7] In Nigeria in 2017–2018, a case of spontaneous abortion at 26 weeks and another of rupture of membrane at 16 weeks with intrauterine fetal death were documented.[8–11] Also in Nigeria, a neonate of 28 days developed encephalitis and died after 8 days.[8] In the 2022 outbreak, ten cases of mpox in pregnant women were notified worldwide, but few scientific reports have been published.[12] Sampson et al. described a case of mpox in a pregnant woman who delivered a healthy neonate at 31 weeks of gestation.[13]

In a systematic review, D'Antonio et al. estimated that vertical transmission occurred in 62% of cases.[11] According to literatura, mpox can be transmitted vertically via the placenta, during or after birth.[14] As very few cases in pregnant women have been reported in the literature, the aim of this study was to describe the evolution and outcome of a case in the 2022 outbreak.

We present the case of a 24-year-old nulliparous woman who was infected with mpox by her husband. On September 2, four days after the date of conception according to the ultrasound, she began with asthenia, localized lymphadenopathy, and a burning rash in the genital region. On September 19, the case was diagnosed with genital herpes, which progressed to the perianal region, back, legs, arms, and soles of the feet. A sample of the genital ulcerated rash lesion was obtained on September 27, and the mpox diagnosis was confirmed two days later. The rash lesions at the time of diagnosis were maculopapular, pustular, umbilicated, and crusting.

Her husband started experiencing symptoms on September 1, but since the primary care physician did not suspect mpox, his appointment with dermatology was not given priority and he had not yet been seen. He presented with penile lesions with rounded edges and black spots, which evolved in different stages until they became scabs. He also presented with localized lymphadenopathy, headaches, asthenia, and myalgia (Fig. 1).

On October 14, the rash lesions on the limbs and perianal region disappeared, but the genital lesion persisted with a permanent burning sensation. On October 21, 50 days after diagnosis, the case reported improvement in the genital lesion. However, she visited the emergency room due to nausea and vomiting for two weeks of evolution, being diagnosed with hyperemesis gravidarum.

Obstetric examination on October 26 identified a residual lesion on the left posterolateral face, which was resolving. In the endocervical PCR sample taken on that day, she was positive for *Chlamydia trachomatis* and was treated with a single dose of 1 g azithromycin. The case was not treated with tecovirimat or any other antiviral drug.

Cephalic delivery occurred at 38 weeks 5 days gestational age. At delivery, the mother presented with chorioamnionitis with two peaks of fever and an episode of fetal tachycardia. Intrapartum antibiotherapy was administered. The amniotic fluid was clear and APGAR 9/9. Birth weight: 3,460 g (P75-P90); length: 50 cm; head circumference: 34 cm.

The newborn was admitted to hospital with a history of chorioamnionitis. There were no clinical or analytical signs of infection; therefore, given the good evolution and after obtaining a negative blood culture result, home discharge was decided after 2 days.

There is limited literature regarding pregnant women affected by mpox, as very few cases have been reported. According to the literature, pregnant women may present with a centrifugal rash or rash in any part of the body.[15] However, in the present case, the lesions and discomfort persisted, almost doubling the average disease duration described in the literature. Clinical manifestations associated with mpox infection have been characterized by lasting approximately 2–5 weeks, with an estimated incubation period of 5–21 days.[14]

The non-specificity of mpox lesions has already been studied in the literature, and some authors have presented them as a cause of diagnostic delay.[16,17] As Torres pointed out, the heterogeneity of symptoms has made diagnosing

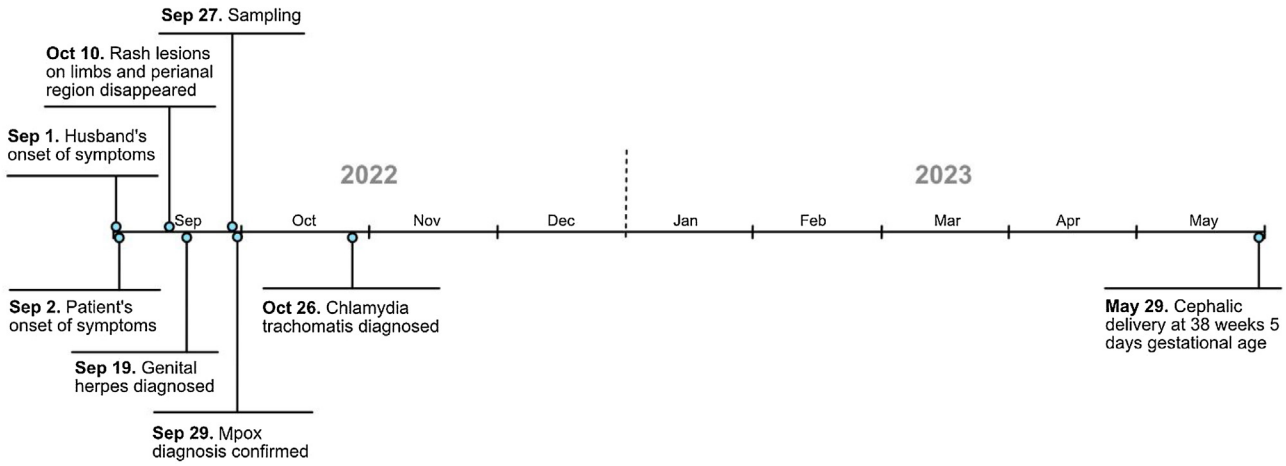

Figure 1 Monkeypox pregnant case timeline: onset of symptoms, diagnosis and delivery.

human mpox infections more challenging and has contributed to delays in diagnosis and treatment. The case presented by Sampson et al., was diagnosed with mpox with a concurrent herpes infection.[13] In our case, she received treatment with clotrimazole and antifungals at the end of August due to suspicion of mycosis without symptom improvement. In mid-September, she received 10 days of acyclovir treatment with for suspected genital herpes, with no improvement. Mpox was not suspected until large purulent lesions were scattered throughout the body.

The husband presented with penile lesions with rounded edges and black points, which evolved in different stages until they became scabs. He also presented localized lymphadenopathy, headache, asthenia, and myalgia. However, his profile did not correspond to the majority of the cases described (i.e., MSM with a history of risky sexual relations, etc.). The absence of a known epidemiological link or risk factors caused a delayed diagnosis in both cases.

According to a study presented in Spain, 92% of mpox cases were identified as gay men, bisexual men, or other MSM, and only 8% identified as heterosexual men or heterosexual women.[18] As Brundu et al. mentioned, it is important to avoid stigmatization based on sexual orientation and practices.[18] It is also worth noting that despite the lower frequency, there have been increasingly more cases of infected heterosexual men and women. Consequently, sexual condition or marital status should not be a reason for not prioritizing a correct study of the case.

Regarding prenatal follow-up, given the few reported cases, there is also little published literature.[5] Gajbhiye et al. recommend training healthcare workers on mpox case identification.[19] Because there is a risk of vertical transmission and fetal demise, close monitoring of pregnant women exposed to mpox is recommended. We also recommend multidisciplinary management of mpox in pregnant women and newborns.

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Laura García-Hernández[a], Ana Hernández-Aceituno[b,*], Ricardo Jesus Moreno Saavedra[c], Eneko Larumbe-Zabala[d]

[a] *Servicio de Epidemiología y Prevención, Dirección General de Salud Pública, Islas Canarias, Spain*
[b] *Servicio de Epidemiología y Prevención, Dirección General de Salud Pública, Islas Canarias, Hospital Universitario de Canarias, Santa Cruz de Tenerife, Spain*
[c] *Servicio de Epidemiología y Prevención, Dirección General de Salud Pública, Islas Canarias, Complejo Hospitalario Universitario Insular Materno Infantil de Gran Canaria, Las Palmas de Gran Canaria, Spain*
[d] *Fundación Canaria Instituto de Investigación Sanitaria de Canarias (FCIISC), Servicio de Epidemiología y Prevención, Dirección General de Salud Pública, Islas Canarias, Spain*

* Corresponding author.
E-mail address: anahdez989@gmail.com
(A. Hernández-Aceituno).

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Successful desensitization to anakinra in a case with immediate cutaneous reaction in Still disease

Exitosa desensibilización a la anakinra en un caso con reacción cutánea inmediata en la enfermedad de Still

Dear Director:

Anti-interleukin (IL)-1 agents are one of the biological drugs which demand it is increasing nowadays. They are mainly used to treat different rheumatic disorders due to its anti-inflammatory properties that help us to reduce signs and symptoms and slow the progression of structural damage. Anakinra is a recombinant human IL-1 receptor antagonist with a good safety profile and well-tolerated drug, nevertheless local reactions in the site of infection can occur. We present a 21-year-old patient diagnosed with Still disease who developed an immediate hypersensitive skin reaction and then underwent successful desensitization. He was diagnosed with Still disease in 2020 starting treatment with colchicine (1.5 mg/day) and subcutaneous methotrexate (20 mg every 7 days). Despite that, the patient presented persistence of fever, arthralgia and arthritis. Anakinra treatment was started as the best therapeutic choice due to its disease-modifying properties in Still disease, with daily subcutaneous injections (100 mg/day). After the 16th day, local skin reaction in the area of puncture appeared as erythema with a diameter of about 10 cm in the area of puncture, edema, increased temperature and pruritus, which was resolved with antihistamines and topical corticosteroids in approximately 4-5 days. Local corticoids were applied before administration in the different sites of puncture tried but the same skin reaction occurs.

Prick tests and intradermal test (ID) were performed with a positive ID, observed at a dilution of 1/100 (also with dilution of 1/1000 an erythema reaction was shown). Therefore, the reaction of the patient was regarded as a type I hypersensitivity reaction to anakinra and desensitization was planned (Table 1). Premedication with 20 mg of bilastine orally every 12 hours during desensitization was administered. We prepared 6 different solutions (from the therapeutic dose 100 mg / 67 ml) with different dilutions (solution F 1/1000000, sol E 1/100000, sol D 1/10000, sol C 1/1000, sol B 1/100, sol A 1/10, and therapeutic doses (100 mg = 0.67 mL). The initial concentration was 0.67 mL of a 1/1000000 dilution of the therapeutic dose. The reason for starting at so low dilution (3 dilutions under the desensitization protocols already published), was because our patient already has a reaction in ID test with 1/1000, so we preferred to start slowly to avoid unexpected reactions and have to stop the protocol. Cumulative dosing was achieved by subcutaneous injections (different puncture sites) daily up to the therapeutic dose of 100 mg/day.

On days 6th and 7th we gave the same dose (50 mg), tolerated on the 5th day because it was administrated at home due to weekend days. On day 8th, the initial design was to administrate full dose in two different punctured sites with 15 minutes between doses but an intermediate dose was given (75 mg divided into 37.5 mg in one leg and 37.5 mg in the other leg) due to mild local reaction in the abdomen the previous day. After that event, the desensitization protocol was continued and completed successful. Up to the current date, the patient is under anakinra treatment well-tolerated and no reactions were reported, applying total injection dose in only one site of puncture.

The interleukin-1 receptor antagonist (IL-1Ra) anakinra, primarily employed for the treatment of rheumatoid arthritis, has recently received approval for use in Still's disease by the European Medicines Agency (EMA).[1] Inade-