

Case report

Gonococcal polyarthrititis with sternoclavicular joint involvement in pregnant woman: a case report

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Abstract

Pregnancy is one of conditions that increase the risk of gonococcal arthritis which result from blood dissemination of neisseria gonorrhoeae. A 20-year-old african female patient (in the second trimester of pregnancy), was admitted to hospital because of fever, asymmetric joint swollen affecting the hands, wrists, left ankle, and right sternoclavicular joint. Laboratory findings (erythrocyte sedimentation rate was 117 mm in first hour, The serum C-reactive protein level was 152 mg/L) the gram stain of genital sample was positif of neisseria gonorrhoeae and trichomonas vaginalis. With antibiotics, outcome of pregnancy was timely and uneventful. Patients should be educated about the mode of transmission of gonorrhoea. Sexual partners should also be treated to prevent dissemination and gonococcal re-infection.

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Introduction

Gonococcal arthritis is a common, well described entity; it tends to affect the knees, wrists, ankles and finger joints. Sternoclavicular joint involvement is rare. We present an unusual case of gonococcal arthritis identified in pregnant woman affecting sternoclavicular joint.

Patient and observation

Consent statement: Written informed consent was obtained from the patient's legal guardian(s) for publication of this case report and any accompanying images. A copy of the written consent is available for review by the Editor-in-Chief of this journal.

A 20-year-old, divorced african female patient, with multiple sexual partners, low socio-economic status, G1P0, 28 weeks pregnant woman. Her past history was marked by offensive yellow vaginal discharge one month before she was admitted to hospital with a 2 day history of fever and asymmetric joint swollen affecting the hands, wrists, left ankle, and right sternoclavicular joint. The physical examination showed a temperature of 40°, painful swelling of the right sternoclavicular joint, the wrists, right knee, tenosynovitis of Extensor areas of the hand, and hemorrhagic pustules over the dorsum of the feet. Complete blood count showed leukocytosis (white blood cell count of 10360 cells/mm³ with 80% neutrophils). Erythrocyte sedimentation rate was 117 mm 1hour, The serum C-reactive protein level was 152 mg/L, A urine sample contained 1 930 000 leukocytes/mm³ with trichomonas vaginalis in culture.

Vaginal swab was positive for Neisseria gonorrhoea. Complement concentrations were normal, TPHA-VDRL was non-reactive, B Hepatitis Antigen. Human immunodeficiency virus (HIV) antibody was negativ. Ultrasound of swelling joint showed: Power Doppler enhanced tenosynovitis of extensor pollicis brevis and abductor pollicis longus, active synovitis of radio carpal joint and metacarpophalangeal joint. Active synovitis in Doppler with erosion of right sternoclavicular joint (**Figure 1**). Antibiotic treatment was started with intravenous cephalosporin (ceftriaxone: 1g/day) during two days. Oral therapy by cefixime 400 mg twice a day over 7 days, Ténonitrozole 250 twice a day to treat trichomonas vaginalis and azithromycin (a single 1 g oral dose) for chlamydia. Improvement in fever and joint involvement obtained within a few days (CRP 6). The outcome of pregnancy was timely and uneventful.

Discussion

Gonococcal infection is still prevalent in developing countries and mainly observed in sexually active young adults. If gonorrhoea is contracted during pregnancy, there is an increased risk of dissemination (DGI) [1]. Gonococcal arthritis develops in approximately 42-85% of patients with DGI [2]. It may be classified into « bacteraemic form » and « suppurative form », but many patients have features of both [3]. In bacteraemic form, clinical features include migratory polyarthralgia (knees, elbows and ankles), moderate fever, chills, vesicular or pustular lesions, tenosynovitis (50 to 60% of cases of gonococcal arthritis [4]) particularly extensor tendon of the hands, wrists, fingers, toes and ankles. Tenosynovitis and polyarthralgia may be related to autoimmune abnormalities induced by N.gonorrhoeae. In « suppurative form » : septic arthritis (joint swelling and effusion) is frequent: it occurs in 50% of DGI patients. Arthritis is frequently

monoarticular. The most commonly involved joint are the knees, wrists, ankles and fingers. Hip involvement is rare [5]. Septic discitis [6] and sternoclavicular arthritis are even rare [7,8]. A destructive arthritis of sterno clavicular joint was described [4].

Risk factors of gonococcal arthritis are : Female sex, Pregnancy, Menstruations, Multiple sexual partners, Low socio-economic status, Intravenous drug use, Complement deficiency, HIV infection, Systemic lupus erythematosus, Gonococcus strain characteristics (Protein 1A serotype, Lack of protein II) [3]. Hospitalization of gonococcal arthritis patients is recommended to confirm diagnosis, search systemic complications including endocarditis, myocarditis, hepatitis (Fitz -Hugh -Curtis syndrome), meningitis and to start antibiotic treatment [3]. N. gonorrhoeae is isolated from blood and synovial cultures in 50 % of gonococcal arthritis patients. When a synovial effusion is present, it should be aspirated. The leukocyte count in synovial fluid is inflammatory, usually in the range of 10 000 to 100 000 cells/mm³ [3]. In patients with purulent joint effusions, synovial fluid culture is often positive with negative blood cultures [9]. Gonococcal arthritis responds well to antibiotics and prognosis is good when appropriate therapy is quickly initiated. Destructive arthritis may be observed in HIV patients or in chronic infections due to inappropriate treatment. Third-generation cephalosporins are the first choice treatment [10], such as ceftriaxone, (1 g IM/IV), ceftizoxime (1g IM/IV every 8h) and cefotaxime (1g IV every 8h). If the woman is allergic to β lactam drugs, spectinomycin, 2 g IM every 12 h may be used. Spectinomycin and ceftriaxone can be used in pregnant women. Parenteral antibiotics should be continued until symptoms have improved for 24-48 h. Oral therapy may then be prescribed to complete 7 days of antibiotic. Cefixime 400 mg twice a day, ciprofloxacin 500 mg twice daily, can be given per os, Ciprofloxacin is contraindicated during pregnancy.

Repeat cultures of all positive sites at least 5 days after the last antibiotic dose are recommended. Infected joints should be aspirated to monitor the decrease in leukocyte count of synovial fluid. Saline lavage can also be used. Surgical treatment is exceptionally indicated [3]. If chlamydial infection is identified, tetracycline or doxycycline for 7 days (not allowed in pregnant women) or azithromycin (a single 1 g oral dose) should be started. Patients should be educated about the mode of transmission of gonorrhoea, tested for HIV and syphilis initially and after 4-6 weeks. Sexual partners should also be treated to prevent dissemination and gonococcal re- infection [3].

Conclusion

Education about the sexual mode of transmission of the disease and the means of preventing sexually transmitted diseases is an integral part of the treatment.

Competing interests

The authors declare no competing interests.

Authors' contributions

Faiza Lazrak participated in the sequence alignment, conceived of the study, and participated in its design and coordination. Khadija Berrada participated in the design of the study. All authors read and approved the final manuscript.

Acknowledgement

I acknowledge anyone who contributed towards the study by making substantial contributions to conception, design, acquisition of data, or analysis and interpretation of data, or who was involved in drafting the manuscript or revising it critically for important intellectual content.

Figures

Figure 1: Active synovitis in Doppler with erosion of right sternoclavicular joint

References

1. Alpna R, LiMaye. Disseminated gonococcal infection in women. Prim Care Update Ob/Gyns. 2003 ; 10(4) : 186-190. **PubMed | Google Scholar**
2. García-Arias M, Balsa A, Mola EM. Septic arthritis. Best Pract Res Clin Rheumatol. 2011;25(3):407-21. **PubMed | Google Scholar**
3. Bardin T. Gonococcal arthritis. Best Pract Res Clin Rheumatol.2003;17(2):201-8. **PubMed | Google Scholar**
4. Guillot X , Delattre E, Prati C, Wendling D. Destructive septic arthritis of the sternoclavicular joint due to Neisseria gonorrhoeae. Joint Bone Spine. 2012;79(5):519-20. **PubMed | Google Scholar**
5. Lee AH, Chin AE, Ramanujam Tet al. Gonococcal septic arthritis of the hip. Journal of Rheumatology. 1991; 18(12): 1932-1933. **PubMed | Google Scholar**
6. Kale SA, Raymond MK, Luskin RL et al. An unusual presentation of gonococcal arthritis in an HIV positive patient. Annals of the Rheumatic Diseases. 1991; 50(8): 572-573. **PubMed | Google Scholar**
7. Mesa JJ, Lin SS, Catalano J, Deutch LS. Sternoclavicular gonococcal arthritis in an adolescent girl. Orthopedics. 1998 Jan ; 21(1) : 87-9. **PubMed | Google Scholar**
8. O'leary AJ, Tejura H, Latibeaudiere M, Edwards G. Gonorrhoea infection presenting in pregnancy with septic arthritis of the sternoclavicular joint. J Obstet Gynaecol. 2006; 26(4) : 373-4. **PubMed | Google Scholar**
9. O'Brien JP, Goldenberg DL, Rice PA. Disseminated gonococcal infection: a prospective analysis of 49 patients and a review of pathophysiology and immune mechanisms. Medicine (Baltimore). 1983; 62(6):395-406. **PubMed | Google Scholar**
10. Schwebke JR, WittingtonW, Rice RJ et al. Trends in susceptibility to Neisseria gonorrhoeae to ceftriaxone from 1985 through 1991. Antimicrobial Agents and Chemotherapy. 1995; 39(4): 917-920. **PubMed | Google Scholar**

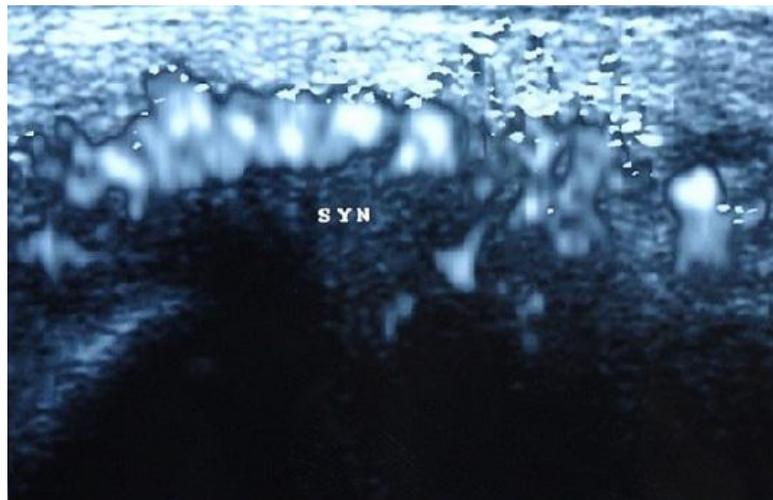


Figure 1: Active synovitis in Doppler with erosion of right sternoclavicular joint