

## Pubic Symphsitis: A Little-Known Complication of Radical Prostatectomy

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### Abstract

### Case Report

Post-surgery pubic symphysis is a rare condition that is difficult to diagnose. It must be mentioned in front of any pubic pain associated with a fever. The biological assessment is often disturbing but not specific. The MRI most often allows the diagnosis to be made and guides the sample to be taken which allows the antibiotic therapy to be adapted. The treatment is based on a long-term combination of antibiotics, the evolution is most often favourable. We report here the case of pubic symphsitis complicating a radical prostatectomy in our centre.

**Keywords:** Pubic symphsitis, radical prostatectomy, urinary tract infection, MRI, puncture biopsy.

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## INTRODUCTION

Infectious pubic symphsitis is a rare condition that can complicate any type of urological [1] or gynaecological surgery, first described by Ellioston in 1827 and then Legueu and Roche in 1923 [2]. It is a septic arthritis often unknown, with deceptive symptoms suspected in front of pain in the pelvic region associated with a fever, and with an incidence difficult to establish in the general population, all the more so as the nosology remains unclear in the literature [3] as well as other etiologies have been described [4]. Here we report the case of a pubic symphsitis complicating a radical prostatectomy in our training.

## CLINICAL OBSERVATION

A 60-year-old patient, hypertensive on amlodipine and diabetic on metformin, admitted to our department for the management of an adenocarcinoma of the prostate Gleason 7(4+3) ISUP 2, classified T2a N0M0 (Figure-1), the patient underwent a laparoscopic radical prostatectomy in June 2020 (Figure-2). The immediate post-operative follow-up was simple and the patient was declared out after 03 days but secondarily he returned to the clinic with inflammatory pubic pain, responding very poorly to non-steroidal anti-inflammatory drugs, associated with significant functional impotence. In view of this clinical picture, the patient benefited from a pelvic MRI scan which revealed the presence of a disjunction of the pubic symphysis associated with intra-articular fluid effusion and oedematous infiltration of the ischio and ilio-pubic branches (Figure-3). After hospitalisation of the patient, clinical examination found a febricula at 38°C, the patient complained of bilateral inguinal pain and

palpation revealed a sensitivity and arching of the pubic symphysis (Figure-4). A biological assessment carried out shows an infectious syndrome with a CRP of 106 mg/l and hyperleukocytosis at 5487, the PSA was 0.11 ng/ml. Bacteriological examination of urine found a *Pseudomonas aerogenosa* infection. A scan-guided biopsy of the pubic symphysis was then carried out and revealed two germs: *Staphylococcus aureus* and *Pseudomonas aeruginosa* (Figure-5).

The patient received IV bi-antibiotic therapy combining ceftazidime 3g/day and ciprofloxacin 400 mg/day for 14 days, followed by an oral relay for 6 weeks.

The evolution was marked by the disappearance of pain and functional impotence, CRP negativation and urine sterilisation.

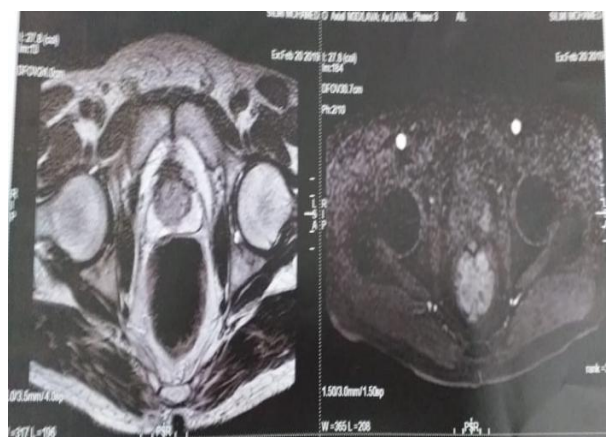


Fig-1: Multiparametric MRI showing the prostate lesion



Fig-2: The surgical part of the laparoscopic radical prostatectomy



Fig-3: Pelvic MRI objectivising pubic symphitis



Fig-4: Arch at the level of the patient's pubic symphysis

ANTIBIOGRAMME			
Nature du germe	:	PSEUDOMONAS AERUGINOSA.	
Origine du prélèvement	:	Tissu.	
PENICILLINES			
Ampicilline	:	Résistant	(Totapen, Ambloain, Ampicilline)
Amoxi + Ac.clavulanique	:	Résistant	(Augmentin, Amoclavain, Clavulin)
Ticarcilline	:	SENSIBLE	(Ticarpen)
PÉNICILLINES HÉMISYNTHÉTIQUES			
Ertapénème	:	Résistant	Invanz
Impénème	:	SENSIBLE	(Tienam)
CÉPHALOSPORINES I			
Cefalotine	:	Résistant	(Keflin)
CÉPHALOSPORINES II			
Cefoxitine	:	Résistant	(Mefoxin)
Céfuroxime	:	Résistant	(Zinacef)
CÉPHALOSPORINES III			
Cefazidime	:	SENSIBLE	(Fortum)
Ceftiaxone	:	Résistant	(Rocephin, Triaxem)
Céfotaxime	:	Résistant	(Claforan)
Cefixime	:	Résistant	(Orsken)
CÉPHALOSPORINES IV			
Cefepime	:	SENSIBLE	
AMINOSIDES			
Amikacine	:	SENSIBLE	(Amikin)
Tobramycine	:	SENSIBLE	(Nebcine)
QUINOLONES			
Ciprofloxacine	:	SENSIBLE	(Ciproxime, Cifloxa)
PÉNICILLES			
Chloramphénicol	:	Résistant	(Tilamycine, Chloramphénicol)
SULFAMIDES			
Triméthoprime + Sulfamide	:	Résistant	(Bactrim, Cotrim, Essaprim)
DIVERS			
Colistine	:	SENSIBLE	(Colimycine)

Fig-5: Results of the scan-guided puncture biopsy of the pubic symphysis

## DISCUSSION

Pubic symphysis, a rare complication, often occurs in a field with favourable conditions, namely: any uro-gynecological surgery with close contact with the pubis (radical prostatectomy as in our case, prostate biopsy, bladder catheterisation, cystectomy, incontinence treatment, childbirth, abortion [5, 6] associated with urethral or bladder perforation, scar or urinary infection as in our case.

According to the latest recommendations of the Infectious Diseases Committee of the French

Urological Society [7], no antibiotic prophylaxis is recommended for radical prostatectomy [2].

According to various authors, the first symptoms appear 2 weeks to 3 months after the causal operation [2, 6, 8, 7]. This often misleading clinical symptomatology is often misunderstood and is manifested by the appearance of exquisite pain at the pressure of the pubis and fever, biologically inconsistent hyperleukocytosis (27 and 20% of cases) [5], high SV and CRP [6].

The standard radiograph of the pelvis can be interesting by showing a widening of the joint space with blurred edges and erosions in 2 to 4 weeks. Osteocondensation and periosteal appositions sometimes leading to synostosis are late signs of appearance.

The CT scan is a more precise and sensitive examination of pubic symphysis, and allows a better visualization of soft tissue invasion, bone sequestration, abscess or possible complications and to guide a sampling.

MRI allows early detection of oedema and inflammation of the bone and muscles, intra-articular effusion or abscess [9].

Then you have to look for the responsible germ. This germ can be isolated in blood cultures or lochies in postpartum. If this investigation is negative, a local sampling by trocar biopsy or surgical scano or echo-guided sampling may be proposed. It should be noted that although urine cultures are sometimes positive, the germ identified may be different from the germ found at the puncture-biopsy of the pubic symphysis. Direct sampling of the pubic symphysis should therefore be carried out if there is any doubt. Moreover, the low virulence of these germs, their long culture time, or prior antibiotic therapy, may lead to the culture being wrongly considered sterile.

The most frequently incriminated germs are: the staphylococcus of a *Pseudomonas aeruginosa* of *Escherichia coli*, a *Proteus mirabilis* after urological surgery, post-partum streptococcus B and anaerobic and polymicrobial infections other germs can be found: pneumococcus, brucella, *Haemophilus paraphrophilus*, enterococcus faecalis, salmonella Indiana, enterostreptococcus, mycobacterium tuberculosis [7].

The treatment is based on a combination of 2 IV antibiotics initially for the first two weeks followed, if the evolution is favourable, by a per os relay. The total duration of the treatment is 6 weeks for the majority of authors, or even several weeks depending on the clinical and biological evolution. In case of failure of the medical treatment or in case of sequestration, intra bony foreign body, or abscess, surgical curettage is indicated [10].

For our patient the evolution was very satisfactory after 2 weeks of targeted antibiotic therapy with a sterile echo-guided puncture biopsy, which gave way for the per os relay to total 6 weeks of treatment.

## CONCLUSION

A rare complication of urological surgery, it is an infectious disease that is difficult to diagnose. It must

be suspected at the slightest post-operative pubic pain associated with a fever. MRI and pubic puncture biopsy are of considerable help in diagnosis and therapeutic choice. The treatment is based on an adapted and prolonged antibiotic therapy.

**Conflicts of Interest:** The authors do not declare any conflict of interest.

**Authors' Contributions:** Khdach Youness and Hamedoun LARBI are the main authors. Boukhlifi youness is the second authors. Alami Mohamed is the head of the urology department. Ahmed Ameur is the head of the urological surgery pole who oversaw patient care and led the project.

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