

Original article

## Contribution of arthroscopy in case of septic appearance arthritis of the wrist: A nine cases series

### *Contribution de l'arthroscopie au traitement des arthrites d'allure septique du poignet : à propos de neuf cas*

A. Hariri, F. Lebailly, A. Zemirline, S. Hendriks, S. Facca, P. Liverneaux\*

Department of Hand Surgery, Strasbourg University Hospitals, 10, avenue Achille-Baumann, 67403 Illkirch cedex, France

Received 5 February 2013; received in revised form 4 May 2013; accepted 15 May 2013

Available online 5 June 2013

#### Abstract

Septic arthritis of the wrist is a diagnostic and therapeutic emergency. Synovectomy and lavage by arthrotomy is often followed by stiffness. The purpose of this study was to evaluate the diagnostic and therapeutic contribution of emergency arthroscopic synovectomy with intraarticular lavage. Nine patients were operated on for wrist pathology with septic appearance. All had signs of local inflammation, three showed locoregional inflammation, three were febrile. In one patient several joints were involved. Seven patients presented with inflammatory or degenerative arthritis. All patients underwent emergency surgery using radiocarpal joint puncture, arthroscopic exploration, intraarticular lavage and synovectomy at both the radiocarpal and midcarpal joints. The results were evaluated by pain, Quick DASH, grip strength, and wrist range of motion. In three cases, joint fluid appeared clear, in three it was turbid, and in three purulent. Gram stain and culture revealed bacteria in four cases. Synovitis was radiocarpal four times, radiocarpal and midcarpal once. In one case, there was radiocarpal and midcarpal chondritis. Average pain was 5.3/10 preoperatively and 2/10 at the last clinical follow-up visit. Mean grip strength was 23.3 kg on the involved side vs. 33.5 kg on the opposite one. Mean flexion was 55° for the involved wrist vs. 68°; mean extension was 52° for the affected wrist vs. 59°. No patient was reoperated on. In all cases, there was no sign of local inflammation, regional lymphadenopathy or systemic infection at the last follow-up. One patient died of colon metastatic cancer. Another patient developed a severe Complex Regional Pain Syndrome type I (CRPS1). Our results suggest three principles of management of wrist arthritis with septic appearance: extended surgical indication, emergency operation and arthroscopic procedure.

© 2013 Elsevier Masson SAS. All rights reserved.

**Keywords:** Arthroscopy; Septic arthritis; Wrist; Infection

#### Résumé

L'arthrite septique est une urgence diagnostique et thérapeutique. Le traitement de référence, le lavage-synovectomie par arthrotomie, est souvent suivi de raideur. Le but de ce travail était d'évaluer l'intérêt diagnostique et thérapeutique du lavage-synovectomie sous arthroscopie en urgence. Neuf patients d'âge moyen 59 ans dont six hommes, ont été opérés pour un poignet d'allure septique. Tous les patients présentaient des signes locaux d'inflammation, trois patients présentaient des signes locorégionaux et trois patients étaient fébriles. Un patient présentait une atteinte pluriarticulaire, sept un rhumatisme inflammatoire ou dégénératif. Tous ont été opérés en urgence par ponction radio-carpienne, exploration puis lavage abondant radio-carpien puis médiocarpien, synovectomie radio-carpienne et médiocarpienne. L'évaluation des résultats consistait à mesurer la douleur, le quick DASH, la force de la poigne, et la mobilité du poignet. Le liquide de ponction était clair trois fois, louche trois fois et purulent trois fois. Des germes ont été trouvés dans quatre cas. La synovite était radio-carpienne cinq fois, radio- et médiocarpienne une fois, il fut découvert une chondrite radio- et médiocarpienne dans un cas. Au dernier recul, la douleur moyenne était 5,3/10 contre 2/10 en préopératoire. La force moyenne était de 23,3 kg contre 33,5 kg du côté sain. La flexion moyenne était de 55° contre 68° du côté sain. L'extension

\* Corresponding author.

E-mail address: [Philippe.Liverneaux@chru-strasbourg.fr](mailto:Philippe.Liverneaux@chru-strasbourg.fr) (P. Liverneaux).

moyenne était de 52° du côté atteint contre 59° du côté sain. Aucun patient n'a été réopéré. Un patient est décédé d'un cancer du côlon métastatique et un a présenté un syndrome douloureux régional complexe (SDRC) de type I. Nos résultats suggèrent trois principes de prise en charge des poignets d'allure septique : technique arthroscopique, délai rapide, indication large.

© 2013 Elsevier Masson SAS. Tous droits réservés.

*Mots clés* : Arthroscopie ; Arthrite septique ; Infection ; Poignet

## 1. Introduction

Septic arthritis is a diagnostic and therapeutic emergency and is associated with significant morbidity and mortality. Standard surgical treatment of septic arthritis of the knee, shoulder and hip is the arthroscopic synovectomy with intraarticular lavage [1–3].

Septic arthritis of the wrist represents 25% of cases of septic arthritis of the upper limb [4]. It is more common in patients with chronic inflammatory rheumatism, which makes diagnosis more difficult [5]. A wrist with septic appearance and non-specific inflammatory signs are indeed suggestive of several diagnoses: septic arthritis, acute episode of chronic inflammatory or degenerative rheumatism and even septic arthritis occurring in a patient with previous history of chronic inflammatory rheumatism.

Neither the inflammatory blood markers nor the intraarticular puncture, whose fluid mostly turns out to be sterile, leads to the etiological diagnosis with certainty [6,7].

The gold standard treatment is intraarticular lavage with or without synovectomy and antibiotics, in order to stop the evolution towards long-term sequelae [6,8]. This is an invasive procedure, often followed by stiffness even in the absence of infection. This is the reason why, facing an atypical presentation of an acute arthritis, which may sometimes be

distorted or weakened by antibiotics, many surgeons are reluctant to practice an emergency arthrotomy.

The purpose of this study was to explore the diagnostic and therapeutic value of emergency arthroscopy in a series of nine patients presenting with wrist arthritis of septic appearance.

## 2. Materials and methods

Between June 2010 and May 2011, nine patients were treated in our department for wrist arthritis with septic appearance (Table 1). Average age was 59 years (range, 41–80). There were six men and three women. All patients presented signs of local inflammation and painful lack of motion of the wrist (septic appearance). Three patients showed regional lymphadenopathy. Three were febrile (> 38 °C). One patient had several joints involved. Seven patients had a previous history of chronic inflammatory or degenerative rheumatism. No preoperative X-ray showed radiographic evidence of septic arthritis. Six patients had an elevated C-reactive protein concentration preoperatively.

All patients underwent emergency surgery using the same technique. Under local regional anesthesia and using a pneumatic tourniquet, which was placed at the arm and inflated without exsanguination, the wrist was suspended in a Whipple tower; 6 kg traction was applied.

Table 1  
Series of nine wrist arthritis cases with septic appearance.

Patient (n)	Age (years)	Gender (M-F)	Dominant side (R-L)	Affected side (R-L)	Local signs	Regional signs	General signs (°C)	Associated pathologies	C-reactive protein (mg/L)
1	68	M	R	L	Inflammation, functional disability	None	37	Degenerative osteoarthritis	130
2	80	M	R	R	Inflammation, functional disability	Lymphangitis	38.8	Degenerative osteoarthritis	141
3	41	M	R	L	Inflammation, functional disability	None	38.5	Chondrocalcinosis	20
4	49	F	R	L	Inflammation, functional disability, purulent flow	None	38.3		80
5	45	M	R	R	Inflammation, functional disability	None	37.8	Degenerative osteoarthritis	73
6	58	M	R	L	Inflammation, functional disability	None	37	Chondrocalcinosis	6
7	65	M	R	L	Inflammation, functional disability	Lymphangitis	37.9	Gout	308
8	63	F	R	R	Inflammation, functional disability	None	37.2	Chondrocalcinosis	4
9	62	F	R	L	Inflammation, functional disability	Axillary nodes	37		3

M: male; F: female; R: right; L: left.

Download English Version:

<https://daneshyari.com/en/article/4049210>

Download Persian Version:

<https://daneshyari.com/article/4049210>

[Daneshyari.com](https://daneshyari.com)