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Original article

Acute felon and paronychia: Antibiotics not necessary after surgical treatment. Prospective study of 46 patients

Panaris aigu : inutilité des antibiotiques après chirurgie. Série prospective de 46 patients

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Abstract

Paronychia and felon are the most common infections of the hand. Surgical treatment is required once an abscess develops, but systematic use of postoperative antibiotic therapy remains open for discussion. Antibiotics both favor the selection of resistant bacteria and increase the cost of treatment. To our knowledge, no study has demonstrated their benefit following excision, yet many practitioners prescribe them systematically and empirically. In our current practices, we do not use antibiotic coverage following excision of uncomplicated paronychia or felon (no signs of arthritis, osteitis, flexor tenosynovitis, lymphangitis), except in potentially at-risk patients (immunosuppressed, diabetic, cardiac valve prosthesis recipient). Since this approach seems to lead to good outcomes, our objective was to evaluate them clinically in this study. Our prospective study included 46 patients who were not considered at risk. There were 26 cases of paronychia, 3 cases of felon and 17 patients presenting both paronychia and felon. All cases were abscessed and uncomplicated. All patients underwent surgical excision, and none received postoperative antibiotics. Follow-up took place on the day after surgery, at days 7, 14, 21 and 45. The main criterion for evaluation was healing of the infection and the wound. We recorded 45 cases of healing with no complications and a single case of recurrence. Surgical excision of paronychia or felon without antibiotic coverage gives excellent results with only rare recurrence. The single failure can be attributed to inadequate excision. Antibiotic therapy has no role in managing uncomplicated felon or paronychia in patients who are otherwise not at risk. Successful treatment depends above all on the completeness of the surgical excision.

Keywords: Paronychia; Felon; Antibiotics; Treatment

Résumé

Le panaris est l'infection de la main la plus fréquente. Au stade collecté, le traitement est chirurgical et l'usage systématique des antibiotiques en postopératoire est discuté. Ils favorisent la sélection de bactéries résistantes et augmentent le coût du traitement. À notre connaissance, aucune étude n'a montré leur intérêt après excision. De nombreux praticiens les utilisent de façon systématique et empirique. Dans notre pratique courante, nous ne les utilisons pas après excision des panaris non compliqués (arthrite, ostéite, phlegmon des gaines ou lymphangite) et en dehors des sujets considérés à risque de complication (immunodéprimé, diabétique, porteur de valve cardiaque prothétique). Cette attitude semble s'accompagner de bons résultats. Notre objectif était d'évaluer nos résultats. Il s'agit d'une série prospective de 46 malades non à risque. Il y avait 26 panaris péri-unguéaux, 3 panaris pulpaires et 17 panaris péri-unguéaux avec diffusion pulpaire. Ils étaient collectés et non compliqués. Ils ont tous été excisés et aucun patient n'a bénéficié d'antibiotiques en postopératoire. Ils ont été revus à j1, j7, j14, j21 et j45. Le critère de jugement principal portait sur la guérison. Nous avons répertorié 45 guérisons et 1 échec. L'excision chirurgicale des panaris sans utilisation d'antibiotiques s'accompagne

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d'excellents résultats et d'exceptionnelles récidives. Notre échec peut s'expliquer par un défaut d'excision. Les antibiotiques n'ont pas leur place dans la prise en charge des panaris non compliqués sur un terrain non à risque. Le succès thérapeutique dépend de la qualité de l'excision chirurgicale.

Mots clés : Périonyxis ; Panaris ; Antibiotiques ; Traitement

1. Introduction

Paronychia and felon are the most common hand infection and can occur in various forms [1,2]. They generally occur due to neglected wounds, onychophagia, manicures or the use of artificial nails [3]. Inadequate treatment can cause the infection to spread locally (flexor tenosynovitis, osteitis or osteoarthritis), regionally (lymphangitis and infection of the hand, wrist or forearm) or even systemically (endocarditis or bacterial translocation). Surgical treatment is performed at the abscess stage; it consists of excision of the infected tissues [1], followed by local care. The surgical indication is well accepted. However, there is disagreement as to the need for medications in the postoperative phase.

Systematic postoperative antibiotics therapy is controversial and many authors feel that it is unnecessary [1,4,5]. To our knowledge, only one study in which 10 patients underwent needle drainage and were given antibiotics has reported excellent outcomes [6]. No other scientific study has shown antibiotics to be beneficial [7]. However, many practitioners use them or recommend them after surgical treatment [3,8–12], based on habits or expert opinions [13]. Our team does not prescribe antibiotics after excision of uncomplicated paronychia and felon (no signs of osteoarthritis, osteitis, flexor tenosynovitis, lymphangitis or general infection). Antibiotics are used only in at-risk patients (i.e., immunosuppressed, diabetic, prosthetic heart valve recipient). Needless antibiotic use is costly, and contributes to the development of resistance and in certain cases, iatrogenic complications [3]. Antibiotics can also slow the infection's progression, which delays the start of care and leads to more severe sequelae [1]. Although excision is the main component of the treatment, the lack of studies about antibiotics makes it hard to determine their role [14].

The primary objective of this study was to evaluate our patients' outcomes with the goal of validating our practices.

2. Material and methods

This was a prospective study of 46 patients (26 men, 20 women) who had an average age of 40 years (18–80); 39% of patients were smokers; 23 were right-handed and 23 were left-handed. These patients were treated between November 2013 and April 2014. The finger infection had been present for an average of 5 days (3–21) before the surgical treatment. Patients were included if they met the following criteria: paronychia or felon at the abscess stage without complications, such as flexor tenosynovitis, osteitis, osteoarthritis or lymphangitis, and absence of at-risk condition such as diabetes, immunosuppression or prosthetic cardiac valve. Radiographs were performed in every case to rule out bone involvement. One patient was excluded because of the presence of osteitis. Paronychia was present in 26 patients (Fig. 1), paronychia with felon in 17 patients and felon in 3 patients. The thumb was involved in 10 patients, index in 11 patients, middle finger in 13 patients, ring finger in 10 patients and little finger in 2 patients. The infection was in the dominant hand in 23 patients. The etiology was onychophagia in 18 patients, crush injury in 5 patients, splinter in 2 patients, laceration in 2 patients and secondary to a manicure in 1 patient. No predisposing factors were identified in the other 18 patients. Eight patients (17%) had been taking the antibiotics prescribed by their family physician for 2–4 days before the surgery. Our healthcare facility's research ethics board approved all aspects of this study.

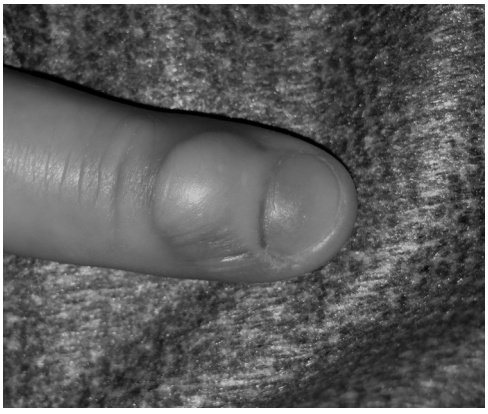

Fig. 1. Paronychia before excision.

Fig. 2. Intraoperative view after excision. Tissues appearing infected were widely excised while preserving as much of the nail matrix as possible. Because of an abscess under the proximal portion of the nail plate, the segment detached by the infection was excised.