



RBO
REVISTA BRASILEIRA DE ORTOPEDIA

www.rbo.org.br



Case Report

Factitious lesions of the hand[★]

Ricardo Kaempf de Oliveira,^{a,*} Leohnard Roger Bayer,^b Daniel Lauxen,^c Felipe Roth,^c
Pedro Delgado Serrano,^d and Paulo Henrique Ruschel^e

^aOrthopedist in the Hand Group, Hospital Santa Casa and Hospital Mãe de Deus, Porto Alegre, RS, Brazil

^bHand Surgeon at Complexo Hospitalar Santa Casa de Porto Alegre, Porto Alegre, RS, Brazil

^cOrthopedics Resident in the Orthopedics Service, Complexo Hospitalar Santa Casa de Porto Alegre, Porto Alegre, RS, Brazil

^dOrthopedist at Hospital Fremap, Madrid, Spain

^eHead of the Hand Surgery Group, Orthopedics Service, Complexo Hospitalar Santa Casa de Porto Alegre; and Orthopedist in the Hand Group, Hospital Moinhos de Vento, Porto Alegre, RS, Brazil

ARTICLE INFO

Article history:

Received on August 24, 2012

Accepted on September 12, 2012

Keywords:

Factitious disorders/diagnosis

Factitious disorders/psychology

Hand injuries

Self-injurious behavior

A B S T R A C T

Objective: The presence of a lesion with atypical presentation, obscure clinical history, which does not improve with classic treatments, shall raise the red flag of the medical team. In such cases, the hypothesis of a factitious lesion shall be considered. Many times the correct diagnosis on the initial assessment may avoid high-cost diagnostic tests, unnecessary treatments, and time consumption of the medical team. We present here two classic cases of factitious lesions that, similar to those described in the literature, is difficult to diagnose and difficult to treat.

© 2013 Sociedade Brasileira de Ortopedia e Traumatologia. Published by Elsevier Editora Ltda. All rights reserved.

[★]Work performed in the Orthopedics Service, Complexo Hospitalar Santa Casa de Porto Alegre, Porto Alegre, RS, Brazil

*Corresponding author at: Rua Leopoldo Bier, 825/301, Santana, Porto Alegre, RS, Brazil. CEP: 90620-100.

E-mail: ricardokaempf@gmail.com (R.K. Oliveira).

Lesão factícia na mão

R E S U M O

Palavras-chave:

Comportamento autodestrutivo
Transtornos autoinduzidos/diagnóstico
Transtornos autoinduzidos/psicologia
Traumatismo da mão

Objetivo: A presença de lesão com apresentação atípica, história clínica indefinida, que não melhora com tratamentos clássicos, deve colocar a equipe médica em alerta. Nesses casos, a hipótese de lesão factícia tem de ser levada em conta. Muitas vezes o diagnóstico correto na avaliação inicial pode evitar a realização de testes diagnósticos de alto custo, tratamentos desnecessários e desgaste da equipe médica. Por meio da apresentação de dois casos clássicos de lesão factícia na mão mostramos que, assim como descrito na literatura, tal patologia é de difícil diagnóstico e tratamento.

© 2013 Sociedade Brasileira de Ortopedia e Traumatologia. Publicado pela Elsevier Editora Ltda. Todos os direitos reservados.

Introduction

Factitious lesions occur in all areas of medicine and the way to address and manage them is similar in all specialties.¹ These disorders are induced by the patient, who manipulates the medical team and causes unnecessary consultations, examinations and procedures.^{2,3} A patient's behavior is defined as factitious when the simulation of a disease is significant and persists sufficiently to cause functional alterations and the need for treatment.⁴ According to the DSM IV (Diagnostic and Statistical Manual of Mental Disorders), factitious lesions are considered to be psychiatric disorders, in which the patient causes his disease intentionally in order to take on the role of a sick person and gain some kind of secondary benefit.⁵

With regard to economic issues, it has been estimated that 5% of all pathological conditions have some component of factitious symptoms. From this figure, an estimate can be made for the large numbers of procedures that are carried out unnecessarily, without presenting any benefit.^{4,6}

Through presenting two clinical cases of factitious lesions of the hand, we raise the alert regarding this disorder. We highlight that, as described in the literature, this disorder is difficult to diagnose and treat.

Case report

Case 1

The patient was a 39-year-old female municipal public employee who came to the consultation office through referral from the plastic surgery team. She presented a chronic ulcerated lesion on the back of one hand, consequent to a supposed bite by a spider.

The lesion had evolved over a six-month period and had already undergone three previous surgical procedures. On the last occasion, 60 days earlier, surgical debridement of the wound had been performed, with partial coverage by means of a skin graft. The patient had been assessed and treated by physicians of five specialties: rheumatology, plastic surgery, infectology, vascular surgery and orthopedics.

Despite the various treatments, which had all been correctly indicated, the lesion had not healed. With the passage of time, the wound became infected and developed into a large open

area on the back of the hand, with bone and tendon exposure (Fig. 1).

On arrival at our service, because of the length of evolution and the severity of the lesion, a reverse-flow antebraichial skin flap (Chinese type) was indicated (Fig. 2). At this time, the patient was off work and was also undergoing psychiatric follow-up, which according to the patient, was because of the chronic disease that did not have any solution.

After this procedure, there was excellent evolution, with complete integration of the flap. However, four weeks later, an area of necrosis appeared on the back of the hand (Fig. 3).

This complication started quickly and presented exacerbated pain symptoms. The factor that made the team think that this was strange, and which raised the suspicion of a factitious lesion, was the location of the necrosis. The borders of the lesion went beyond the limit of the flap. This complication was impossible to explain from an anatomical and pathological point of view.

The possibility of a diagnosis of a factitious lesion was presented to the patient and her relatives, who denied the hypothesis of self-flagellation. The patient then underwent debridement of the lesion and closure of the dressing with a plaster cast. Following this, the psychiatric and plastic surgery teams of the hospital were contacted to assist in the case.



Figure 1 - A 39-year-old female patient with an ulcerative lesion on the back of one hand, with an initial six months of evolution after a supposed bite from a spider. Cutaneous lesion with exposure of bone and a lesion of the extensor tendon of the third finger. The patient had already undergone three surgical procedures and had been treated by four medical teams.



Figure 2 - Preoperative planning to construct a skin flap from the volar region of the forearm based on reverse flow of the radial artery (Chinese flap), of dimensions 7 x 5 cm (A). During the operation, after debridement and covering the defect with the flap; note the good vascularization of the flap after releasing the tourniquet (B).

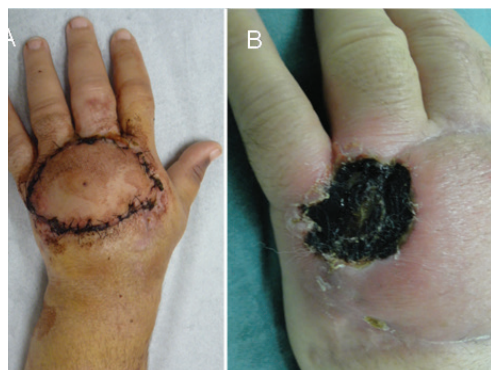


Figure 3 - Excellent initial evolution with complete integration of the flap (A). After a period of four weeks, an area of necrosis appeared on the back of the hand. This complication started quickly and had exacerbated symptoms. The border of the lesion went beyond the borders of the flap. This lesion would be impossible from an anatomical and pathological point of view (B).



Figure 4 - After the possibility of a factitious lesion had been diagnosed, the patient underwent debridement of the lesion and closure of the dressing using a plaster cast (A). Serial changes of dressing and plaster cast every 15 days produced complete healing of the wound (B, C, D and E).

Dressings were applied every two weeks, and the plaster cast was changed on these occasions. Over a six-week period, the lesion healed completely and the patient did not return for any reviews, as had been requested by the attending medical team (Fig. 4).

Case 2

The patient was a 34-year-old female housewife who was attended because of a necrotic lesion on the dorsum of the third finger of one hand subsequent to a knife injury from an assault (Fig. 5).

The wound had evolved over a 20-day period and presented exposure of the extensor tendon. Surgical treatment using a local advancement skin flap and full skin graft in the donor area was indicated. After initially good evolution over a two-week period, the patient started to present pain, with cutaneous distress and necrosis in parts of the flap. After another few days, the area of necrosis increased and again evolved to exposure of the tendon.

A new surgical reconstruction was performed, using a reverse-flow dorsal deepidermalized homodigital flap (Fig. 6). However, again, after initially adequate evolution following this procedure, flap necrosis developed and the patient reported suffering acute episodes of exacerbated pain.

To repair this outcome, a lesion reconstruction procedure using a crossfinger heterodigital flap was followed (Fig. 7). Through this surgical procedure, the wound healed. However, once again, after a few days, the lesion evolved in a catastrophic manner, with necrosis of almost the entire dorsum of the finger (Fig. 8). Like in Case 1, described above, there was tissue necrosis at points beyond the initial lesion and beyond the flap, which caught the attention of the attending team, which promptly led to suspicion of a factitious lesion.

We talked to the patient about this, but she denied provoking any injury. At this point, psychiatric follow-up for the case was instituted. It was noted that the patient was in litigation with her workplace and had serious conjugal relationship problems.

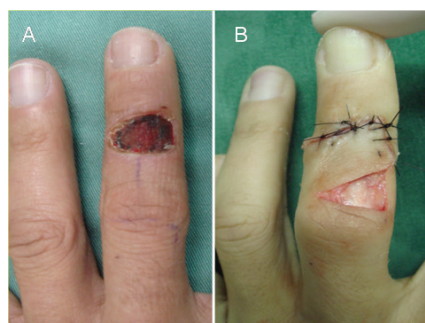


Figure 5 - A 34-year-old female patient was attended presenting a necrotic lesion on the dorsum of the third finger after a supposed knife injury in an assault. The wound had evolved for 20 days and presented exposure of the extensor tendon (A). Surgical treatment consisting of a local advancement skin flap and full skin graft in the donor area was indicated (B).

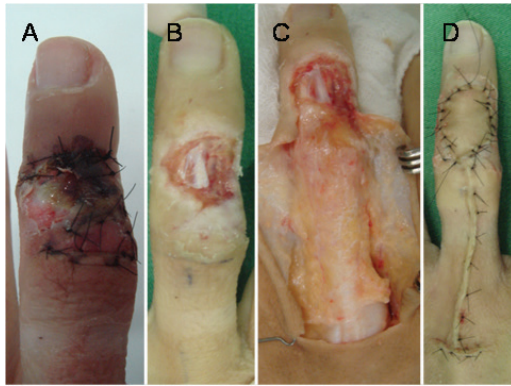


Figure 6 - After initially good evolution for two weeks, the patient started to present pain and necrosis in part of the flap. After a few more days, the area of necrosis increased and the extensor tendon again became exposed (A and B). New surgical reconstruction using a reverse-flow dorsal deepidermalized homodigital flap was indicated (C and D).

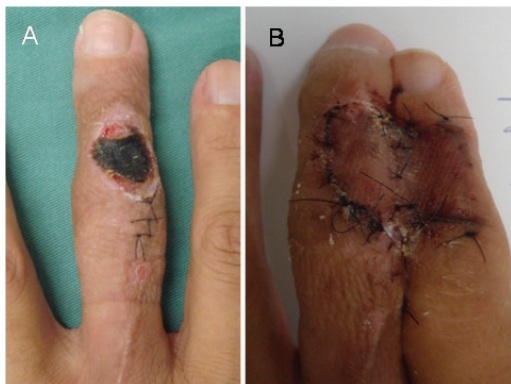


Figure 7 - Once again, after initially adequate evolution and after removal of the stitches and dressing, there was an acute episode of pain and evolution towards necrosis of the flap (A). New surgery using a cross-finger heterodigital flap was then indicated (B).



Figure 8 - This procedure initially healed the wound but, after a new episode of acute pain, the wound evolved in a catastrophic manner, with necrosis along almost the entire dorsum of the finger. Also like in case 1, there was necrosis at points beyond the initial lesion and the flap, which caught the team's attention, thus suspecting a factitious lesion (A, B and C).



Figure 9 - As the definitive procedure, amputation of the fingertip was performed, with construction of an inguinal flap (McGregor flap) (A). After new distress of the flap (B), there was reasonable evolution, with complete healing of the wound (C).

It was decided to carry out a final and definitive procedure. The fingertip was amputated and an inguinal flap was constructed (McGregor flap). There was reasonable evolution, with complete healing of the wound (Fig. 9).

The patient continued with orthopedic outpatient follow-up for 12 months. She also continued to regularly attend consultations with the psychiatric team.

Discussion

Factitious lesions continue to be a major challenge for orthopedists. These are conditions that lead physicians to make mistakes, since they seek to find organic causes for such lesions.^{2,7} They look for immunological, infectious or tumoral causes that might explain the disease.^{7,8} Moreover, factitious lesions place a burden on the healthcare system, because of the multiple treatment failures. They cause wastage of the medical team and expose these patients to unnecessary risks.^{9,11}

Searching for risk factors is important for the diagnosis. The main findings are a lack of objective history for the disorder, consultations with different physicians, use of a variety of medications (analgesics and psychotropics), psychiatric treatment, job-related problems, exaggeration of complaints and symptoms, and previous histories of abuse during childhood (social and physical), illness and family destructuring.^{2,9,12,13} These are adults with unstable personal relationships and problems in social and work relationships.¹² They are patients who present lack of apprehension or concern regarding the disorder or the treatment.¹⁴ They have already been to several physicians and have undergone many tests and procedures. The lesions have no apparent cause or have histories that are incompatible with the pathological condition.

To make a correct diagnosis, it is essential that the medical team should maintain a high degree of suspicion.¹⁴ Lesions and wounds showing the shape of objects, presence of foreign bodies in subcutaneous tissues, cuts, edema, cord marks and, especially, lesions that do not respond to conventional

treatment are all forms of presentation of this pathological condition.^{2,9,10,14,15} The forms of the lesions and the means through which they are caused vary in the literature. Mutilations, amputations, chronic edema caused by trauma or tight cords, postural deformities, manipulation of wounds using different cutting instruments, fecal and oral contamination, bites or burns are different forms of self-induced injuries.^{2,7,15} In the cases presented here, attention was drawn to the bizarre presentation of the postoperative complications, in which the necrosis and infection sites went beyond the limits of the initial lesion and led to suspicion of factitious disease.

Factitious lesions can present in different ways and it is essential that the medical team should be attentive in relation to the warning signs. A presumptive diagnosis of this disease should be signaled when the lesions are presented after trauma, surgery or events associated with social or psychiatric conflict, secondary gain or multiple therapeutic failure reported by the patient.^{2,3,5,7-10,12,13,16}

Like in the present study, previous reports have been predominantly from female patients.^{2,8,15} Only positional lesions of the hand have occurred slightly more often among males.⁸ The clinical presentations have been characterized by a variety of forms of dramatization or introspection, and by exaggerated pain crises that are not in line with the observed lesions.^{5,9,14} The patient's personality may help in making the diagnosis, along with the peculiarities associated with the medical consultation, such as the presence of a relative or friend to attest to the patient's distress.^{2,5,13} Frequently, when asked about the illness, these patients may respond in a harsh and hostile manner, although they may sometimes have a timid attitude and avoid dialogue as much as possible.¹⁵

Factitious lesions of the hand can be divided into four groups, according to their clinical presentation: Secretan's syndrome, postural disorders, Shaft syndrome (acronym for sad, hostile, anxious, frustrating and tenacious) and Munchausen syndrome.

Secretan's syndrome is characterized by chronic edema provoked on the back of the hand. It can be caused by using tightened cords or by means of trauma (self-flagellation). It responds promptly to immobilization and elevation of the limb. It is differentiated from tenosynovitis through consisting of extra-compartmental lesions in the subcutaneous layer.^{11,14,17}

Other postural disorders are also known, such as "closed fist", "psychoflexed hand" or "psychoextended hand" and their variants.^{7,18}

In Shaft syndrome, the patient does not cause lesions, but rather, induces the medical team to perform unnecessary procedures, through simulating diseases, deformities or symptoms. This syndrome occurs more frequently among females. These are extremely depressive and theatrical subjects and they use pain as their main subterfuge.^{2,6,19} Such patients arrive with exaggerated and disproportional symptoms for the pathological conditions presented. They present family histories of chronic lesions or psychiatric diseases. These patients typically seek several physicians and undergo large numbers of procedures.⁶

Munchausen syndrome is an old term traditionally used for factitious lesions. It is not described as a specific pathological conditions in DSM IV (Diagnostic and Statistical Manual of

Mental Disorders), but in practice its use is indicated for severe and chronic factitious lesions.¹ It was first described by Asher,¹⁶ to characterize patients who actively provoke their lesions. These are lesions of acute etiology, associated with dramatic and fantastical histories. Most such cases seen by any given professional have already undergone a previous intervention performed by a colleague. These patients have hostile attitudes when confronted with the truth behind the events. They present a desire to maintain control over the situation and do not accept the psychiatric diagnosis, which makes the condition difficult to treat and gives rise to peregrination between physicians. This condition is commonly associated with borderline personality disorders.⁵ Their mutilating attitudes are subconscious, which increases their willingness to accept invasive treatments.⁸ The secondary gain may be related to work, financial gains, or affective gains.^{2,3,13}

Differentiation between different forms of factitious lesion is often difficult or even impossible, because these patients may present characteristics of more than one abnormality. The most important factor in the treatment is not to define the correct diagnosis but to recognize that it is the patient who is causing the disease, consciously or subconsciously.^{1,20}

With regard to treatment, it is important to recognize that factitious lesions are in fact a form of presentation of a pathological condition of psychiatric origin and that a multidisciplinary medical approach is needed for its treatment. Thus, as in the cases presented, proving the origins of the lesions is rarely simple.^{2,3,13,16}

A combination of conservative treatment and psychotherapy is the best approach towards factitious lesions. Physicians have the function of protecting patients against lesions and not letting these lesions worsen. No definitive guide towards approaches to take in relation to factitious lesions exists, and each case should be assessed separately. At the start of the treatment, it is important to place limits on the physician-patient relationship. Personal and extra-hospital contacts need to be restricted. Telephone calls and lateness for or absence from consultations must not be allowed. Medications must not be prescribed in excessive quantities. It needs to be borne in mind that the treatment is long and requires much patience. Psychotherapeutic treatment is essential, as is support from the patient's family, in treating factitious lesions. From a psychiatric point of view, patients with factitious lesions are considered to present a low risk of suicide.

The therapy should be based on clear objectives outlined by the physician. The patient needs to understand each stage of the treatment and that failure to cooperate will lead to termination of the treatment.² Treatment for these patients should be administered with care: their psychiatric abnormalities induce a search for organic disease.^{3,7,21}

Certain measurements are extremely important for treating factitious lesions. In situations of diagnostic suspicion and presumptive treatment of the pathological condition, the medical professional should take the appropriate attitude towards the situation: a firm and secure attitude during consultations, clarifications regarding the proposed therapy and seeking to avoid confrontations with the patient.^{7,8,14} Whenever possible, use of imprecise diagnoses such as tendinitis, fibromyalgia or dystrophy should be avoided.

Such diagnoses might help to reaffirm the patient's state of sickness.⁷ Diagnostic error helps these patients to accept the notion of an organic disease that would explain all of their illness.⁷ As seen in the cases presented here, such patients undergo multiple procedures and only after these fail is a diagnosis of a factitious lesion suspected.

Measures such as covering the wound with a plaster cast or elevation of the limb to improve the lesion through edema are usually successful.^{2,13} Prolonged treatments and multiple procedures are not guarantees of good evolution.⁷ One way to avoid mistakes in the diagnosis and treatment is to have the evaluation done by a more experienced physician.^{2,7}

Confronting the patient with a diagnosis of a factitious lesion does not always produce good results. In a series of 45 patients with factitious lesions, Eastwood and Bisson²² did not find any difference in the results from treatments between approaches with or without constriction. Getting into conflict with patients caused greater anguish and fury, which increased the risk that the patient might abandon the treatment or change the medical team.²² When a confrontational technique is used, it should be done slowly and progressively, and not punitively. The patient has to be shown that the lesion does not fit into any described pathological condition and that the tests done suggest that the disease was provoked.

Despite correct treatment, patients with factitious lesions have the tendency to become chronic and recurrent patients. Louis and Greene³ followed up 33 patients with factitious lesions over a period of 4.5 years and observed that only four of them returned to their normal activity, while 10 progressed to sequelae and definitive deformities and two underwent amputation of a body segment.

From an ethical and legal point of view, it is advisable to fill out the medical files and document the suspected lesions with as many details as possible. The hospital's legal department should also be notified, because of the risk of litigation or suicide. Ethically, the obligation of medical confidentiality ends in cases of imminent risk to the health of patients or their relatives. Although accepted in the past, today it is no longer acceptable to undertake any type of filming or invasion of patients' privacy in order to prove a diagnosis, without their permission.²³

There is no universal solution for diagnosing and treating factitious lesions. Nonetheless, it is essential to recognize signs that might indicate abnormalities in the lesion patterns presented, along with risk factors associated with the patient's psychological state. The correct diagnosis avoids unnecessary examinations and procedures, along with wastage of the medical team. Multidisciplinary treatment (orthopedic and psychiatric) is an essential tool in improving these patients.

Conflicts of interest

The authors declare no conflicts of interest.

REFERENCES

1. Birman MV, Lee DH. Factitious disorders of the upper extremity. *J Am Acad Orthop Surg.* 2012;20(2):78-85.
2. Kasdan ML, Stutts JT. Factitious injuries of the upper extremity. *J Hand Surg Am.* 1995;20(3 Pt 2):S57-60.
3. Louis DS, Lamp MK, Greene TL. The upper extremity and psychiatric illness. *J Hand Surg Am.* 1985;10(5):687-93.
4. Wallach J. Laboratory diagnosis of factitious disorders. *Arch Intern Med.* 1994;154(15):1690-6.
5. American Psychiatric Association. Diagnostic and statistical manual of mental disorders: DSM-IV. 4th editor. Washington: American Psychiatric Association; 1994.
6. Wallace PF, Fitzmorris CS. The S-H-A-F-T syndrome in the upper extremity. *J Hand Surg Am.* 1978;3(5):492-4.
7. Vázquez CICFI. Mano psicógena. In: Evaluación y tratamiento de las secuelas postraumáticas I: Miembro superior y raquis. España: Mapfre; 2005. p. 251-64.
8. Al-Qattan MM. Factitious disorders of the upper limb in Saudi Arabia. *J Hand Surg Br.* 2001;26(5):414-21.
9. Friedman B, Yaffe B, Blankstein A, Rubinstein E, Rieck J. Self-inflicted hand injuries: diagnostic challenge and treatment. *Ann Plast Surg.* 1988;20(4):345-50.
10. Masterton G. Factitious disorders and the surgeon. *Br J Surg.* 1995;82(12):1588-9.
11. Butler RJ, Hartwig RP, Gardner H. HMOs, moral hazard and cost shifting in workers' compensation. *J Health Econ.* 1997;16(2):191-206.
12. Feldman MD. Tailspin: the development of factitious illness. Patient or pretender: inside the strange world of factitious disorders. New York: John Wiley & Sons; 1994.
13. Louis DS, Jebson PJ. Factitious disorders. *Tech Hand Up Extrem Surg.* 1998;2(2):88-93.
14. Burke FD. Factitious disorders of the upper limb. *J Hand Surg Eur Vol.* 2008;33(2):103-9.
15. Grunert BK, Sanger JR, Matloub HS, Yousif NJ. Classification system for factitious syndromes in the hand with implications for treatment. *J Hand Surg Am.* 1991;16(6):1027-30.
16. Asher R. Munchausen's syndrome. *Lancet.* 1951;1(6650):339-41.
17. Jørgensen J, Gammeltoft M, Schmidt H. Factitious lymphoedema, Secretan's syndrome. *Acta Derm Venereol.* 1983;63(3):271-3.
18. Shorter E. Paralysis to fatigue: a history of psychosomatic illness in the modern era. New York: The Free Press; 1992.
19. Kasdan ML, Soergel TM, Johnson AL, Lewis K, White WL. Expanded profile of the SHAFT syndrome. *J Hand Surg Am.* 1998;23(1):26-31.
20. Smith RJ. Factitious lymphedema of the hand. *J Bone Joint Surg Am.* 1975;57(1):89-94.
21. Barsky AJ, Borus JF. Somatization and medicalization in the era of managed care. *JAMA.* 1995;274(24):1931-4.
22. Eastwood S, Bisson JI. Management of factitious disorders: a systematic review. *Psychother Psychosom.* 2008;77(4):209-18.
23. Kass FC. Identification of persons with Munchausen's syndrome: ethical problems. *Gen Hosp Psychiatry.* 1985;7(3):195-200.