

GIANT CONDYLOMA ACUMINATUM: REPORT OF SURGICAL TREATMENT AND EVOLUTION OF HEALING

CONDILOMA ACUMINADO GIGANTE: RELATO DE TRATAMENTO CIRÚRGICO E EVOLUÇÃO DA CICATRIZAÇÃO

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ABSTRACT

Giant condyloma acuminatum, a rare variant of anogenital condyloma, shows rapid growth associated with immunodeficiency. Wound care after resection and outcomes were reported. NGS, black, 55 years, HIV positive, with giant condyloma acuminatum affecting from the groin to the intergluteal groove, which was resected, remaining the wound opened for later skin graft. Topical care included polihexametilene biguanide/betaine solution, essential fatty acids solution, hydrofiber/silver, and poliuretane film. The wound developed secondary infection, so hydrofiber was replaced by polyurethane foam/silver/ibuprofen. There was improvement in infection and pain, contraction of the edges and the presence of granulation tissue across the lesion. In those conditions the skin graft was performed after 41 days. Despite possible confusion bias, it can be inferred that the care adopted prepared the wound bed to receive the skin graft.

Keywords: Buschke-Lowenstein tumor; wound healing; wound infection; pain; fatty acids, essential; anti-infective agents, local; betain; silver; ibuprofen.

RESUMO

O condiloma acuminado gigante, variante rara do condiloma acuminado anogenital, apresenta crescimento rápido associado a estados de imunodeficiência. Relatamos os resultados com os cuidados com a ferida operatória. Trata-se de homem de etnia negra, 55 anos, portador do vírus da imunodeficiência humana com condiloma acuminado acometendo desde as regiões inguinais até o sulco interglúteo, que foi ressecado permanecendo a ferida aberta para posterior enxertia. Os cuidados com essa ferida incluíram solução de polihexametileno biguanida/betaina, solução de ácidos graxos essenciais, hidrofibra/prata e película. Evoluiu com infecção secundária sendo a hidrofibra substituída por espuma de poliuretano/prata/ibuprofeno. Houve melhora da infecção e da dor, contração das bordas e presença de tecido de granulação em toda a lesão. Naquelas condições, o enxerto de pele foi realizado no 41º dia. A despeito dos possíveis vieses de confusão, pode-se inferir que esses cuidados prepararam o leito da ferida para receber o enxerto de pele.

Palavras-chave: tumor de Buschke-Lowenstein; cicatrização; infecção dos ferimentos; dor; ácidos graxos essenciais; anti-infecciosos locais; betaina; prata; ibuprofeno.

INTRODUCTION

The giant condyloma acuminatum (GCA) is a rare variation of the anogenital condyloma acuminatum and a sexually transmitted disease related to the human papillomavirus (HPV) (subtypes 6 and 11). The disorder is also known as Buschke-Löwenstein tumor (BLT), Ackerman verrucous carcinoma or Delbaco y Unna precancerous condylomata⁽¹⁻⁵⁾.

The GCA was described in 1896 by Buschke and, in 1925, Buschke and Löwenstein reported a case of penile tumor with clinical behavior of malignancy. However, in the histological analysis, it was a condyloma acuminatum. Only then the clinical identity was better defined. The description of the disease when located in the anus was made by Dawson et al., in 1964⁽³⁻⁷⁾. The incidence of GCA in the population is 0.1%, with post-treatment recurrence of between 60 and 66% of patients^(1,3). It is more common among men, aged 50 years of age⁽⁵⁾. The fast growing of this tumor is usually associated to the immune deficiency^(3,5).

Macroscopically, the lesion is large, vegetative, warty, of exophytic aspect and slow growth with infiltrative base, affecting the anal and vulvar regions, the penis and scrotum, perineum, the perineal region and the anal canal. Histologically, it presents a chronic infiltrate with thickening of the Malpighian layer, of benign aspect. However, it clinically presents malignant behavior, once it infiltrates the adjacent tissues. The mitosis are rare, there is the occurrence of hyperkeratosis and the basement membrane remains intact^(1,3-5,7-9).

The risk factors associated to the development of the GCA are the precarious hygiene habits, sexual promiscuity, chronic irritation, immunosuppression by HIV or HTLV-1 and chronic and recurrent genital warts^(2,5,7).

There are many therapeutic strategies for the treatment of GCA, among which topical agents are used, immunotherapy, and chemoradiotherapy and surgery, being this last one the most effective once it avoids recurrence and malignancy^(1,7).

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After resection, one of the aspects of nursing care is to monitor the progress of healing. The objective is the early identification of possible complications, with periodic evaluation of the wound. This follow-up must be done according to the kind of healing (primary closure, delayed primary or by secondary intention), adopting the appropriate care from the identification of individuals needs and knowing the potential complications⁽¹⁰⁾.

The study has the objective of reporting the healing of the wound resulting from the resection of the anogenital GCA in patients with acquired immunodeficiency syndrome (AIDS), once that we did not find publications on the evolution of healing of this kind of injury in immunosuppressed patients.

The study highlights the importance of a well-planned care, guided by evidence as an important part of the treatment and shows an effective result which may be reproduced by other professionals.

CASE REPORT

All the bioethics principles postulated by the Resolution 196/96, of the National Research Ethics Commission (CONEP), which approaches the research involving human being were respected. The study was submitted to the Research Ethics Committee (CEP), obtaining a favorable opinion (No. 96/2012).

It is about a patient admitted in the hospital wards of the state public network, a reference in care of patients with infectious diseases in the city of São Paulo.

Black man, 55 years of age, single, reported slow growth of a smelly tumor, four years before, affecting his anogenital area. He was HIV positive for three years, making irregular use of antiretroviral medication and a chronic smoker. The physical exam revealed a warty surface, irregular, well delimited and of infiltrative base affecting from the coccygeal area to the base of the penis, including the groin and scrotum. The pre-treatment with topicals did not have total remission of the lesions, leading to surgical resection leaving the wound to be closed later on with rotation of patches and grafts. In the first post-operation day, the evaluation by the Skin Group of the institution found a stable patient, denying pain and without clinical signs of infection. It was about a surgical wound with extensive

raw area, beginning at the lower part of the penis, bilateral inguinal region, until the sacral region (**Figure 1**).

The plan for topical care included the selection of the dressing, considering the comfort of the patient, the ease of application and its effectiveness, thus elaborated:

1. Antisepsis with polyhexamethylene biguanide and betaine solution (PHMB);
2. Application of essential fatty acids (EFA) solution;
3. Secondary dressing with silver hydrofiber;
4. Fixation with transparent film.

The change was performed daily, due to the location of the lesion, in order to avoid secondary infections. For the protections of the surrounding skin, we used a barrier cream to each dressing change. For pain assessment, we used the Visual Analogue Scale for Pain (VASP).

In the third post-operation day, signs of local infection were identified, such as putrid odor, pain (score 10 in VASP), increase in the amount of necrosis and slough in the whole lesion and greenish exudate (**Figure 2**).

We collected secretion from the lesion in order to grow a culture and replaced the dressing by polyurethane foam with ibuprofen in the scrotal area, due to intense pain, and polyurethane foam with silver in the rest of the lesion to control the infection and absorption of the exudate. It was decided to replace the silver hydrofiber by the polyurethane foam, which absorbs the exudate without adhering to the injury, keeping it moisturized while avoiding maceration of the edges. The remaining cares were kept with suspension of the use of EFA until the control of the exudate.

It was observed, by the visual analog scale for pain, a reduction of the score (score 5 VASP only to manipulation) with the use of polyurethane foam with ibuprofen, being possible to suspend its use after five days, adopting the polyurethane foam with silver on the whole injury. This way, there was an improvement of signs of infection.

The bacterioscopy of the secretion revealed an infection by *Morganella morganii*, suggesting a change of the systemic antimicrobials.

The conduct regarding topical care was kept during the subsequent period. After five days of suspension of the use of EFA, its



Figure 1 – Initial assessment, first Day post-operation.

use was resumed, once the amount of exudate was already well controlled. Concomitantly there was control of odor, reduction of the necrosis area and the increase of granulation tissue.

In the 35th post-operation day, the patient reported absence of pain (score 0 VASP). There was granulation tissue on the whole wound, contraction of the edges and absence of sign of secondary infection (**Figure 3**), which allowed its closing with partial skin grafting, removed from the anterior surface of the thigh, in the 41st post-operation day. The post-graft evolution was good. In the hospital return after four months, there was a full healing. Two years after that, there was no recurrence of the lesions.

DISCUSSION

This case report presents the results of the topical treatment adopted for a surgically treated case in our institution. The hospital admittance occurred hours before the surgery, this way, minimizing the risk of infection⁽¹⁰⁾.

The conduct related to the choice of dressings and the frequency of changes were based on publications about the wounds management and international consensus, because we did not find studies reporting topical care after the resection of GCA in which the wound would heal by second intention, probably, because it is a rare disease.

The sequence of the making of the dressing aid, with the respective recommendation, is described up next:

1. antisepsis with PHMB solution, the product indicated in this case following the recommendation of the Consensus Document⁽¹¹⁾ for the prevention of local infection, due to the location and extent of the wound;
2. application of the EFA, in order to maintain the humidity, promote healing, offering protection against infection and prevent adhesion of the dressing⁽¹²⁻¹⁴⁾;
3. secondary cover with silver hydrofiber was indicated with the objective of releasing silver in order to prevent infection. The hydrofiber was used in this moment because of its ease of being shaped to the site of the injury, as well as keeping its fixation due to its thin thickness⁽¹⁵⁾;



Figure 2 – Third Day post-operation, signs of infection.



Figure 3 – Forty-first Day post-operation, grafting programming.

4. fixation with transparent film was used due to its difficult fixation with other products and the need of keeping the dressing still, interacting with the lesion.

The barrier cream was applied at each dressing change with the objective of protecting the adjacent skin, thus avoiding aggression caused by the dressings change or even by the contact with the exudate of the wound^(16,17). Due to the location of the injury, in order to prevent secondary infections, the change was performed daily, once the contact with feces and urine increases this risk⁽¹⁸⁾.

In addition to this risk, there is also the AIDS diagnosis, a disease in which the immune system is severely compromised, the patient being then more likely to develop infection⁽¹⁹⁾.

Initially, we opted for the dressing hydrofiber with ionic silver in order to control the exudate and the microbial burden of the wound, preventing the secondary infection through the dispensation of silver, and at the same time keeping moist to the wound, since the hydrofiber captures the exudate and forms a cohesive gel, retaining it in its structure⁽²⁰⁾. Due to its being of discreet thickness material, malleable and easily molded, it was proven ideal to facilitate the making and maintenance of the dressing, without causing discomfort to the patient, considering the place of the wound^(20,22).

In the third post-operation day, when identified the signs and symptoms of secondary infection, we proceeded to the collection of the material in order to identify the infectious agent and adequacy of topical conduct, due to the failure of the first dressing in avoiding secondary infections⁽¹⁸⁾.

In the presence of sign of infection in acute wounds^(10,18), the recommendation is to collect material for microbiology, one of the techniques used being the one of Levine, in which after appropriate cleaning with saline solution, a sterile swab must be rubbed in rotation in a 1 cm² area of the wound, with enough pressure for the interstitial liquid to be absorbed⁽¹⁸⁾. The swab must be stored and shipped in a Stuart media⁽²³⁾.

The isolated agent in bacteriology, from the culture of the secretion of the wound, was the *Morganella morganii*, which is an opportunistic enterobacteria which may be found in nosocomial settings, and is related to the infection of wounds. When present, it releases toxins and enzymes, activates matrices of metalloproteinases (MMPs) and plasminogen, degrading elastin and thus interfering negatively in the healing process of the wound^(24,25). Most patients affected by *M. morganii* respond well to the antimicrobial treatment; however, mortality rates are high⁽²⁶⁾.

In this case, the infection was controlled with systemic antimicrobial associated to the topical, recommended in the presence of signs of systemic infection. The topical antimicrobial chosen was silver, set in a preventive way since the first evaluation and adequate its presentation form after signs of secondary infection. The silver is usually the topical antimicrobial of choice, being present in several dressings. This is due to its broad spectrum, acting on yeast, fungi and bacteria, being necessary low concentrations deposited in the lesion in order to achieve this effect^(15,27,28).

The choice of the dressing in the presence of infection must be made considering the ideal characteristics for an effective action. These characteristics include promoting a moist mean, though not saturated, in order to stimulate healing, associated to the

antimicrobial substance of broad spectrum and low potential for resistance. It is desirable that the antimicrobial activity is given in a controlled way in the devitalized tissue, which is a culture mean for microorganisms; besides being non-toxic, fast-acting, non-irritating/sensitizing, non-adherent and effective even in the presence of abundant exudate^(20,24).

The dressings with sustained silver liberation differ from older products, such as silver sulfadiazine and silver nitrate, for releasing ions of the metal in the wound in a more controlled and prolonged way, allowing less frequent changes, a fact which reduces the damage caused to the tissue by the removal of the dressing, the discomfort caused to the patient by the manipulation of the place, the cost of the treatment and the risk of nosocomial infection⁽²⁷⁾.

For the adequacy of the conduct, we decided to use a thicker dressing, less flexibility, that, however, demonstrated the ability to be molded to the raw wound, avoiding the excess of exudate to be in touch with the wound⁽²⁹⁾ and at the same time keeping moisture^(20,30). The silver ions in these foams are part of the matrix, and are released as the exudate is absorbed⁽²⁸⁾.

In addition to all these characteristics, the substitute choice of dressing was based on the effectiveness of polyurethane foams which release silver to control Gram-negative bacteria with reduction of over 99% in 6 hours in *in vivo* simulation; and as in its safety during the healing process, once it was demonstrated that there is no toxicity for the fibroblasts^(15,31).

The pain is another relevant aspect that must be a part of the overall evaluation of the patient with wounds, as symptom of infection^(10,16,18). For the evaluation of pain we used the VASP, with which the patient quantifies the symptoms using the scale from 0 to 10, using as a parameter 0 for the absence of pain and 10 for the worst pain ever experienced. In the literature several scales for the evaluation of pain are mentioned; all of them depend on the cognition degree and abstraction ability of the patients in order to be effective, once the pain can only be measured by the report of those who feel it. We elected the VASP for being the most used one, being simple to understand and consistent to the cognitive aspects of the patient. The scale was introduced to the patient and they were requested to position the ruler in the figure equivalent to the pain experienced in that moment^(16,32) (**Figure 4**). Due to the pain reported along with the signs of infection, we decided to interlayer the polyurethane foam dressing with sustained silver release and polyurethane foam dressing with sustained ibuprofen liberation, with the objective of helping in the control of pain⁽¹⁶⁾. Strategically, this foam was placed only in areas in which the patient reported experiencing the highest pain intensity, thus allowing silver to act on the rest of the lesion. At the same time in which the foam exerted its analgesic effect in the lesion, it helped in the control of the infection through the absorption of the exudate by capillarity and its retention in the air spaces of the structure⁽²⁰⁾.

We can conclude that the conduct adopted, considering the presence of infection in the wound, were appropriate, once it is a immunosuppressed patient, affected by an infection by enterobacteria about which the literature demonstrates high mortality rates⁽²⁶⁾.

The same way, we may observe the effectiveness of the polyurethane foam with sustained release of ibuprofen helping in the control of the pain, since in only five days of use, there was an important

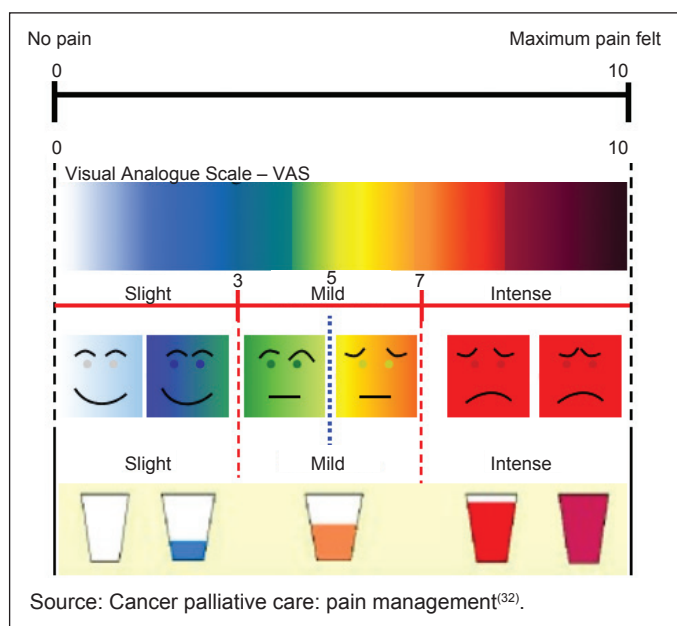


Figure 4 – Visual Analogue Scale.

reduction of the score (from 10 to 5) considering that the pain was reported only during the handling for changing the dressings.

When beginning the use of dressings with silver to control the infection of the wounds, it is recommended the observing of its evolution for 15 days, period in which it is possible to evaluate whether or not the desired effect was achieved, i.e., whether or not the infection was controlled. After this period, if the infection is solved, the use of dressing with silver is suspended and a new strategy is drawn in order to stimulate healing. In case there is improvement in the signs and symptoms of the infection, we can continue the use of silver until it is solved. In case there is no improvement, or even if there is worsening of the infection, the use of the dressing must be suspended and substituted by another one with a topical antimicrobial⁽¹⁵⁾.

In the case reported, we chose to use the dressing with composition and technology different from the first one, because there were no dressings with another associated antimicrobial available in the institution; and after 11 days of use of the polyurethane foam with sustained release of silver it was possible to observe improvement in the infection by reducing the amount of unfeasible tissue in the wound, control of pain and presence of granulation tissue.

The grafting was performed in the 41st post-operation day, remaining with the occlusive dressing associated to the negative pressure wound therapy without changing it for 7 days and evolving with healing of 70% of the grafted area. The remaining 30% of the area of the lesion by second intention with the use of a topical EFA solution and protection with rayon with daily change.

Other studies are necessary in order to confirm the effectiveness of the products used in this kind of lesion, once that we presented one single case in which they were used.

Despite the possible biases of confusion, it can be inferred that the use of PHMB and betaine solution, EFA solution and polyurethane foam on the resulting lesion of GCA resection controlled the secondary infection, the pain, promoted autolytic debridement, increase of granulation tissue and contraction of the edges.

The topical care adopted kept the ideal conditions for healing, preparing the wound to receive the skin graft.

Conflict of interests

The authors report no conflict of interests.

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