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Case Report

Surgical Resection of a Giant Gluteal Tumor: A Multidisciplinary Approach in Reconstructive Plastic Surgery

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Abstract

We present the case of a 15-year-old male patient from Olancho, with a painless, progressively growing, vegetative tumor in the left gluteal region. This tumor eventually occupied approximately 70% of the area, affecting his ability to sit, wear underwear, and maintain proper personal hygiene. Physical examination revealed a mobile, painless mass. Surgical resection with wide margins under general anesthesia was performed, and the sample was sent for histopathological examination. During the same procedure, an attempt was made to approximate the defect, although without complete closure. Antibiotics and anti-inflammatory drugs were prescribed for seven days, and he was advised to rest without sitting to avoid postoperative complications. A second surgical intervention was performed 15 days later to completely close the remaining defect. Postoperative management continued with antibiotics and anti-inflammatory drugs, achieving satisfactory outcomes without significant complications, despite the complexity of the case.

Keywords: *Surgical Resection; Giant Gluteal Tumor; Reconstructive Plastic Surgery*

Introduction

Progressively growing tumors in soft tissues, especially in functional anatomical regions such as the gluteal area, represent a considerable clinical and surgical challenge, both due to the aesthetic implications and the impact on the patient's quality of life [1]. In this context, we present the case of a 15-year-old adolescent from Olancho, who consulted for a painless tumor lesion, with vegetative characteristics, located in the left gluteus [2]. The large mass made basic functions such as sitting, dressing, and maintaining proper personal hygiene difficult, significantly affecting his physical and emotional well-being [3].

The approach to this condition required a two-stage surgical intervention, initially with a wide resection of the lesion and, subsequently, with the definitive reconstruction of the defect [4]. This clinical case highlights the importance of a comprehensive assessment, individualized surgical planning, and adequate postoperative follow-up in patients with complex soft tissue injuries [5]. Through the analysis of this experience, we seek to contribute to clinical knowledge in the management of atypical gluteal tumors in adolescents [6].

Case Presentation

This is a 15-year-old male patient from the department of Olancho who consulted the general surgery service due to a progressively growing tumor mass in the left gluteal region. According to the patient and his family, the lesion had been developing for several months, characterized by being painless, soft, and vegetative in appearance. The mass had reached such a size that it interfered with the patient's ability to sit, wear underwear, and maintain proper personal hygiene.

Physical examination revealed a mobile, nontender, vegetative-appearing mass with defined edges, involving approximately 70% of the left gluteus. Based on these findings, surgical resection of the tumor was indicated under general anesthesia, with wide safety margins, and tissue submission for pathological examination. During the procedure, attempts were made to approximate the resulting defect, but complete closure was not achieved due to the size of the resection. Postoperative treatment with antibiotics and anti-inflammatory drugs was initiated for seven days, in addition to strict instructions to avoid sitting to prevent wound dehiscence.

Fifteen days later, the patient was taken back to the operating room for complete closure of the surgical defect. The clinical course was satisfactory, with no significant postoperative complications, allowing for adequate functional and cosmetic recovery.

Direct image obtained by a medical research team during a hospital stay

Figure 1

The image shows a large, vegetative-appearing skin lesion located on the left gluteal region of a 15-year-old male patient. The mass, with a rough, nodular surface and verrucous characteristics, has defined borders and a pinkish-gray color, with no signs of ulceration. It occupies approximately 70% of the gluteal area, significantly limiting basic functions such as sitting, wearing underwear, and maintaining proper hygiene.

This finding is related to the clinical case of an adolescent from Olancho, whose tumor was painless but progressively growing. The image corresponds to the moment prior to surgical resection with wide margins, performed under general anesthesia. A second procedure was subsequently required for complete closure of the surgical defect. Comprehensive management led to a favorable outcome, highlighting the importance of timely management of lesions with these characteristics.

Surgical procedure: Resection of extensive gluteal tumor with wide margins

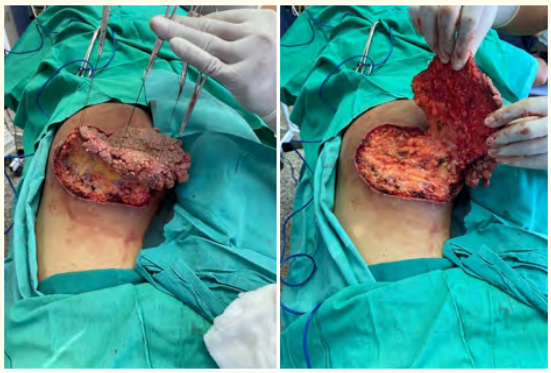

Figure 2

The image shows the intraoperative moment corresponding to the surgical resection of a large, vegetative tumor located in the left gluteal region of an adolescent patient. During the procedure, the edges of the mass are lifted using surgical forceps and retractors, allowing clear observation of the deep dissection plane and the affected area. The procedure was performed under general anesthesia, following the resection protocol with wide margins to ensure complete removal of the affected tissue and prevent recurrence.

This intervention represents the first surgical procedure, the objective of which was complete excision of the lesion. Given the magnitude of the defect, it was decided not to perform immediate closure, allowing the tissues to develop favorably before a second reconstructive surgery. This carefully planned, phased surgical approach minimizes complications, ensures the patient's progressive recovery, and optimizes both functional and aesthetic outcomes.

The image corresponds to the immediate result after complete resection of a vegetative tumor in the left gluteal region

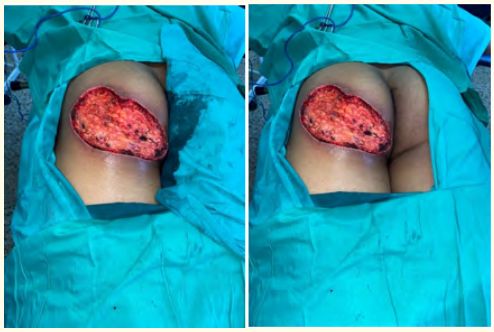

Figure 3

A wide, clean surgical site is evident, with exposure of subcutaneous tissue and underlying fat, confirming that the excision was achieved with wide margins, respecting the integrity of deep muscle structures. The resection plane is uniform, with no evidence of active bleeding or visible tumor remnants, indicating adequate hemostatic control.

This represents the completion of the first surgical stage, during which the priority was complete removal of the lesion. Due to the magnitude of the defect, primary wound closure was not performed. A delayed surgical approach was planned to allow tissue inflammation to subside, reduce the risk of dehiscence, and assess the need for subsequent reconstructive techniques. During this period, the patient was managed with antibiotics, anti-inflammatory drugs, and restricted sitting as part of the postoperative measures to ensure a favorable outcome.

The image shows the result of the second surgical stage

Figure 4

In this procedure, the approximation and partial closure of the surgical defect is observed using sutures performed in layers, indicating an attempt at secondary reconstruction after a period of favorable postoperative progress. Although the closure is not complete, a significant reduction in the exposed area has been achieved, which will facilitate progressive healing by secondary intention or allow for additional interventions if necessary.

This delayed approach is justified in extensive lesions located in anatomical areas subject to tension, such as the gluteal region, where immediate primary closure could carry risks of dehiscence or infection. In this case, the patient's progress was stable in the days following the initial resection, allowing this second procedure to be scheduled under controlled surgical conditions. Pain control, infection prevention through antibiotic therapy, and postural restraint remain key to a successful surgical outcome.

The image shows the late postoperative result of complete surgical closure

Figure 5

The image shows the late postoperative outcome of complete surgical closure of the left gluteal region of an adolescent patient who previously underwent resection of a large vegetative skin lesion. The surgical wound is sutured with simple interrupted sutures, well aligned, and shows no obvious signs of infection, hematoma, or dehiscence. Healing is progressing well, with skin edges in apposition and no marked tension, indicating a favorable recovery process.

This result corresponds to the second surgical procedure completed, which achieved complete closure of the defect generated by the tumor excision, following a waiting period that allowed for tissue recovery and control of potential complications. The strategy used preserved functionality, improved local aesthetics, and prevented infection. This type of staged approach is essential for large lesions, especially in anatomical areas of high mobility and pressure, such as the gluteal region. The patient will continue to receive outpatient follow-up to monitor the healing process and evaluate long-term functional and aesthetic results.

The image shows the final postoperative result

Figure 6

At this advanced stage of healing, a well-formed, linear scar with a pinkish-brown color can be seen, with no signs of active inflammation, dehiscence, or infection. The surrounding skin shows good adaptation, with no significant retractions, suggesting satisfactory progress of the tissue closure and regeneration process.

The image demonstrates that step-by-step surgical management, combined with antibiotics and appropriate postoperative measures, resulted in successful functional and cosmetic recovery, significantly improving the patient's quality of life by eliminating a lesion that compromised mobility, hygiene, and self-esteem. This case demonstrates the importance of proper surgical planning and rigorous clinical follow-up in pediatric patients with large lesions.

The image shows the final phase of the healing process

Figure 7

A well-defined, linear scar in advanced maturation is observed, with no signs of infection, dehiscence, or significant retraction. The cosmetic and functional outcome is favorable, with preserved symmetry and no major skin irregularities.

This stage corresponds to the outpatient follow-up after the second surgical intervention, which completely closed the surgical defect created by the initial tumor resection. The progress indicates an adequate response to treatment, with controlled healing, a result of good surgical technique, use of prophylactic antibiotics, and appropriate postoperative care. This case underscores the effectiveness of a staged surgical approach for extensive skin lesions with functional compromise.

The clinical procedure illustrated in the "before and after" images is described below

Figure 8

Before the procedure: The first image shows a 15-year-old male patient with a large vegetative lesion located in the left gluteal region. The lesion is characterized by its nodular morphology, rough surface, and warty appearance, covering approximately 70% of the left gluteus. This tumor was painless but grew progressively, compromising basic functions such as sitting, wearing underwear properly, and maintaining proper personal hygiene. Due to its size and clinical characteristics, surgical resection under general anesthesia was indicated.

After the procedure: The second image shows the mid-term postoperative outcome following complete resection of the tumor. The area shows a well-formed surgical scar, with signs of good healing progress, and no visible complications such as dehiscence or infection. The wound has closed adequately, and significant cosmetic and functional improvement is observed in the previously affected area, indicating a satisfactory resolution of the case with good patient recovery. This result reflects appropriate surgical planning and successful postoperative management.

Discussion

Large benign skin tumors in pediatric patients represent a clinical challenge due to both their functional impact and their psychological implications [7]. In the case presented, the progressive and vegetative growth of the gluteal lesion significantly affected the patient's quality of life, limiting basic activities such as sitting and maintaining adequate hygiene [8]. Unlike the case of lidocaine poisoning reported by Cedillo Velásquez., *et al*. (2023), where the emergency medical approach focused on immediate life support, our approach was directed towards elective surgical treatment, based on a stepwise strategy that allowed for the safe and effective management of a large mass.

Benign tumor lesions, such as giant lipomas, neurofibromas or epidermal cysts, although they do not represent a direct oncological threat, can reach considerable sizes if not treated in time, generating functional compromise [9]. Surgical resection with wide margins is the

treatment of choice, as performed in this case, allowing for complete removal of the affected tissue. In parallel, the need for postoperative protocols tailored to the size and location of the wound is emphasized. This was achieved through a second surgical intervention for delayed closure, minimizing the risk of dehiscence and promoting progressive healing [10].

Unlike anesthetic emergencies, where prevention and immediate surveillance are essential, the management of injuries such as the one described here requires careful surgical planning, based on an assessment of the local anatomy, potential postoperative complications, and the patient's need for functional adaptation. However, both cases coincide in the importance of multidisciplinary care and close clinical follow-up, which guarantees the patient's full recovery and reduces long-term risks [11].

This case reaffirms that, even in resource-limited settings, successful surgical outcomes are possible when appropriate clinical protocols are followed, a detailed anatomical assessment is performed, and care is provided that focuses on patient function and well-being. Furthermore, it highlights the importance of documenting these types of injuries in pediatric patients, as the literature on the management of large benign tumors in this population is still limited [12].

Conclusion

The surgical management of large benign tumors in the gluteal region, such as the one observed in the 15-year-old male patient, represents both a clinical and functional challenge. This case demonstrates the importance of a comprehensive evaluation, meticulous surgical planning, and adequate postoperative follow-up to ensure satisfactory results. Complete resection of the mass with wide margins resolved the problem without major complications, restoring functionality and improving the patient's quality of life. The favorable outcome of the surgical procedure and the final aesthetic healing highlight the value of timely and professional intervention. This type of case also underscores the need for further scientific documentation in the region on progressively growing benign tumors in pediatric patients, in order to strengthen clinical evidence and care protocols in similar settings.

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