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Technic

REPAIR OF THE ANTERIOR ABDOMINAL WALL WITH OMENTAL FLAP

Reparação da parede abdominal anterior com o omento maior

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ABSTRACT – ***Introduction*** - The loss of substance of the abdominal wall is usually replaced by synthetic prostheses with advantages and disadvantages. The greater omentum is a totipotent structure and can be applied also to this repair. ***Objective*** - To present technical possibility of abdominal closure after resection of abdominal wall muscle part with omentum. ***Method*** - The technic was carried out in two adult patients with colonic adenocarcinoma with invasion of the right abdominal wall. Was required the resection of the right half of the abdominal wall to join the en-bloc resection. The left half of the greater omentum was used to seal the abdominal cavity fixing it with sutures to the edges of the surgical wound. Final closure was done with the skin freed from the flanks. The recovery was satisfactory. In the late postoperative period incisional hernia occurred. ***Conclusion*** - The greater omentum can be used to repair the partial loss of the abdominal wall.

HEADINGS - Abdominal Wall. Omentum Majus. Abdominal closure. Skin graft.

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DESCRITORES - Parede abdominal. Omento maior. Fechamento abdominal. Retalhos de pele.

RESUMO – ***Introdução*** - As perdas de substância da parede abdominal são substituídas por próteses sintéticas. Acontecem vantagens e desvantagens. O omento maior é uma estrutura totipotente e se aplica, também, à reparação. ***Objetivo*** - Apresentar possibilidade técnica de fechamento de parede abdominal com omento após ressecção da parte muscular. ***Método*** - Operou-se dois pacientes adultos com adenocarcinoma de colo direito invadindo a parede abdominal. Foi necessária a ressecção da metade direita da parede para fazer parte do monobloco. A metade esquerda do omento maior, remanescente, foi usada para vedar a cavidade abdominal através de sua sutura às bordas da ferida. Pôde-se recobrir com pele mobilizada nos flancos. A evolução foi satisfatória. No pós-operatório tardio formou-se hérnia incisional. ***Conclusão*** - O omento maior é um recurso a mais para reparar a perda parcial de parede abdominal.

INTRODUCTION

The repair of abdominal wall hernias when giant, massive or repeated have a technical resource accepted by the surgical community. It is the placement of a prosthesis that exceeds in extension the affected area[1].

When there is loss of substance due to trauma or tumor resection of the wall, the problem remains open and unsolved because it can not leave it open, like what is done in severe and generalized peritonitis (peritoneostomy). In cases when prosthesis is not covered totally by skin, infection happens. Over it, the granulation does not occur properly requiring their removal or replacement. The clinical evolution requires expensive handling and hospital stay is unpredictable.

For this reason and other arguments, the author tried to change tactics using in two cases, almost equals, the greater omentum remaining from tumor resection. The presentation of this experience is the objective of this paper.

TECHNIC

It was used in adult male patients with colonic adenocarcinoma, big ones, invading the terminal ileum and abdominal wall. At the operation, there was no macroscopic signs of tumor invasion inside the abdomen with no extension to retroperitoneum. The first patient had undergone chemotherapy without success. Both were operated on twice, first to incomplete tumor resection and the second for suspected acute complicated appendicitis. Failures in prior operations facilitated the invasion of the tumors to abdominal wall.

The surgical procedure

Laparotomy was performed and the operative procedure showed anterior parietal involvement by tumor located on cecum and right colon. Rounding up the affected area, right colon and omentum to the right, was cutted off the wall, involving all levels of the skin to the peritoneum. The tumor mass was attached to the colon, omentum and ileum. Section of ileum was performed with safety margin, and the transverse colon and omentum removed en bloc (Figures 1 and 2); an ileo-colic anastomosis terminoterminal in an extra-mucosal plane was done. There was dermoepidermal mobilization around the wound to obtain enough skin to close surface. Earlier, the omentum, in its left half, was freed from tumor invasion and mobilized to be transferred in part to the right, in the parietal extension of the opening. The operation was ended with omental synthesis to the edge of the wound around its outline. With this manouver, cavity was protected by an omental curtain (Figure 3). Suture of skin, edge to edge with isolated stitches, closed the wall. In case of existing no enough skin, even after the dermoepidermal mobilization, omentum could be remained exposed. One

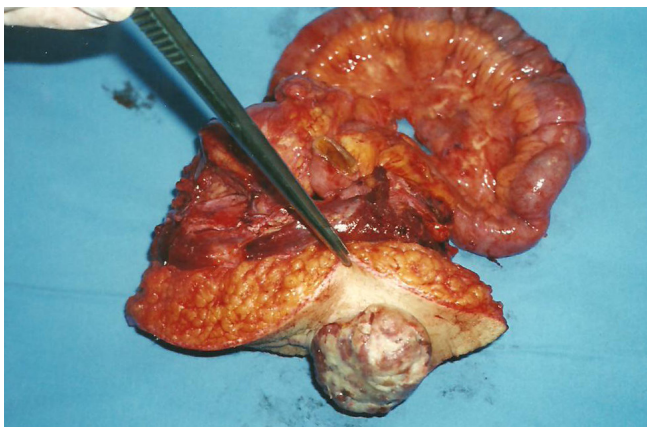

FIGURE 1 - En-block resection of the right anterior abdominal wall (clamp) , colon and terminal ileum

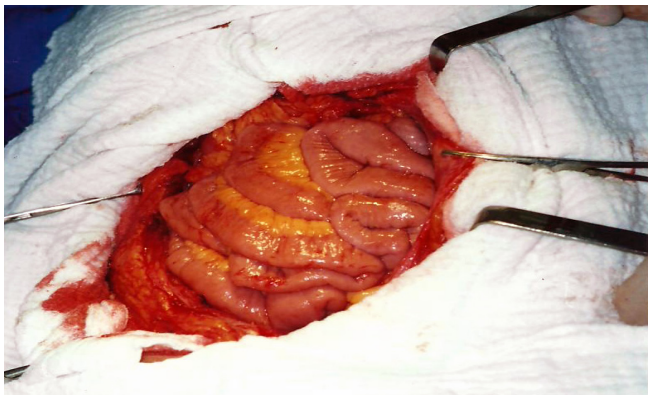

FIGURE 2 - Exposure of the viscera after removal of the right anterior abdominal wall

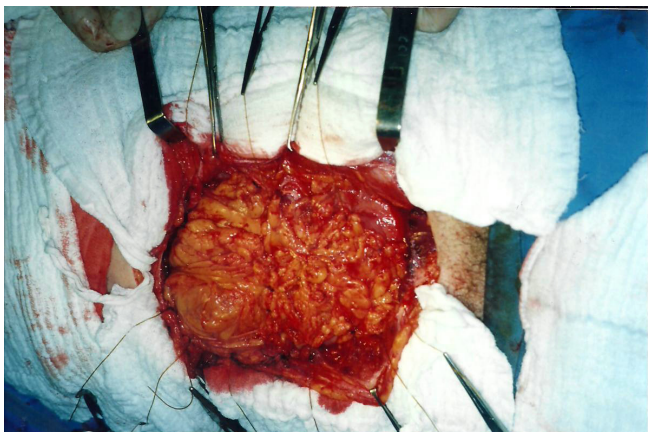

FIGURE 3 - The left half of the greater omentum, free from disease, was moved to the right side and sutured to the edges of the wound

way or another, full dressing bandage to permit abdominal partial immobilization was done. The postoperative period is worrisome for three reasons: evisceration, abdominal hypertension and thrombosis. For these reasons, the patient had long term bladder catheterization, bed with elevation of its back, delicate stimulation to movements, breathing and lower limbs exercises. The evolution was reasonable, the wall grained and healing was consolidated, resulting in incisional hernias, controlled by appropriate bandage and continence.

DISCUSSION

Resection of the abdominal wall is incompatible with life. While preserving half of it is possible to use devices that facilitate the repair

Except for the risk of leaving exposed viscera without intense peritoneal reaction, as in peritonitis, it is possible to cover it partially leaving a laparostomy. Increased intra-abdominal pressure promotes evisceration. The high pressure by chronic

cough, lack of skin, physiological abdominal efforts (constipation, urination) make the abdominal closure frequently impossible.

Partial resection have repair today using prosthesis. If it has the quality not to have any adherence to abdominal viscera, much better. Even without skin and covering it is possible to keep the prosthesis exposed for subsequent biological recovery. This requires extreme caution and a very prolonged hospitalization, in addition to those situations already mentioned that facilitates evisceration.

Apart from the cost and hospital expenses, it occurred to the author to use the omentum remnant of a large tumor resection to repair the right anterior abdominal wall. It was possible in part by mobilizing the greater omentum, the left half, preserved the en bloc resection, and bringing it to the right half, turning it in the form of a curtain, sutured the edges of the open area. Naturally, this situation is unstable and subject to any effort evisceration. Skin mobilization could cover the wound, although with some tension. A tight dressing with crepon from the chest to the pelvis could give security to the abdominal cavity without compromising the ability of respiration and abdominal physiological functions.

The bandage was gently removed, with care and replaced as needed, gradually loosening it to not compromise the fragile resistance of the sutures from both omentum and skin, offering better opportunity to the healing process.

CONCLUSION

This observation permit to use the omentum, macroscopically free of tumor invasion, to repair the opening of the abdominal wall, after partial resection, and facilitate granulation and epithelization. The resulting incisional hernia can be handled in the future.

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