SURGERY FOR CYST OR ABSCESS OF THE BARTHOLIN GLAND, WITH SPECIAL REFERENCE TO THE NEWER OPERATION OF MARSUPIALIZATION*

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Surgical treatment of cyst or abscess of the Bartholin gland is nearly always either incision and drainage, or excision, of the gland. If we look closely into these techniques we should realize that both have serious shortcomings. The operation of incision and drainage does give relief, but the cause of the enlarged gland—blockade of its duct—still remains. Hence the frequence of recurrence after this inadequate type of surgery. The operation of excision also has serious objections. True, when the gland and its duct are completely excised the cause of the disease at this time is removed; but ablation, especially if the gland on the opposite side is substandard or absent, would nearly always suppress or eliminate lubrication of the labia. This interference with the normal physiological process of lubrication of the introitus, so important especially in the reproductive years for satisfactory coitus, is very liable to lead to dyspareunia, with its potential of marital complications.

Quite apart from these objections, unless removal of the gland is complete, recurrence of cyst or abscess is a strong possibility. Furthermore, the operation of excision is so often a long, difficult and bloody procedure, especially in the large or old chronic gland. Badaro and Khowry[1] and also Condamin[2] have published articles on the methods of both incision and excision of the Bartholin gland.

Comparing excision with incision and drainage, the excision method is alleged to be the better of the two. Actually it is the worse. Because of both the immediate and future hazards associated with the time-honored methods of incision and excision of the Bartholin gland, J. W. Davies,[3] of New York, and Philip Jacobson,[4] of Petersburg, Virginia, have each, separately, conceived and designed a simple technique by which the incision for drainage is converted into a new and permanent ostium. In the newer techniques, no tissue but only the pathological contents of the gland are removed. In contrast with the excision operation, which is practically always restricted to the chronic gland, the new procedures to be described below can be employed in either the acute or chronic state; and also in the pregnant or postpartum conditions. The author operated on an acute Bartholin gland right after delivery of the child.

It should be noted that since it is the duct of the gland that is at fault, the incision must be into the duct.

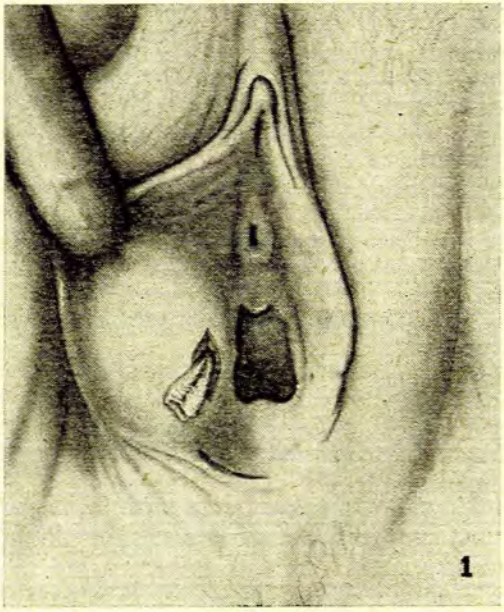

Fig. 1.† In the Davies technique of drainage of a cyst or abscess of the Bartholin gland, the wick of gauze (or foreign body) by virtue of prolonged contact helps to keep the incision open. This opening becomes the new and permanent physiological ostium.

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† This and the other illustrations to this article (Figs. 1-5) are taken from the author's book *Gynecology: Surgical Techniques*,[8] published by Charles C. Thomas, Springfield, Illinois.

The basic principle of the Davies method[3] is that prolonged pressure by a foreign body in the incision made for drainage converts this opening into a permanent, physiological ostium. Under local anesthesia an incision is made in the enlarged gland—actually into the duct—close to the site of the original ostium. The liquid contents are removed with gauze or with the aid of saline in the syringe. While the cut edges of the lining sac are held with clamps the cyst cavity is packed with gauze (Fig. 1). The pressure of the packing tends to prevent agglutination of the mucocutaneous edges, thus allowing epithelization of the os. Some operators use a catheter or a rubber drain instead of gauze. The patient returns twice weekly to have the packing or other material changed. At the end of about 5 weeks there will nearly always have been established, as started by the original incision, a permanent ostium $\frac{1}{2}$ inch or so in diameter. Through this new ostium drains the natural viscid fluid from the regenerated secreting epithelium of the gland (Fig. 5).

It can be seen that the mucocutaneous edges of the new ostium might at some time in the healing period make contact, causing closure of the outlet. Some patients, and surgeons, do object to the prolonged series of visits during which the gauze is changed. In order to minimize the chance of premature closure Jacobson[4] conceived and designed the operation of exteriorization or marsupialization, by which the gland duct is brought out through the incision.

MARSUPIALIZATION

Marsupialization of the Bartholin gland is the conversion by exteriorization of the gland duct to become the permanent ostium, which drains freely on to the adjacent mucocutaneous surface.

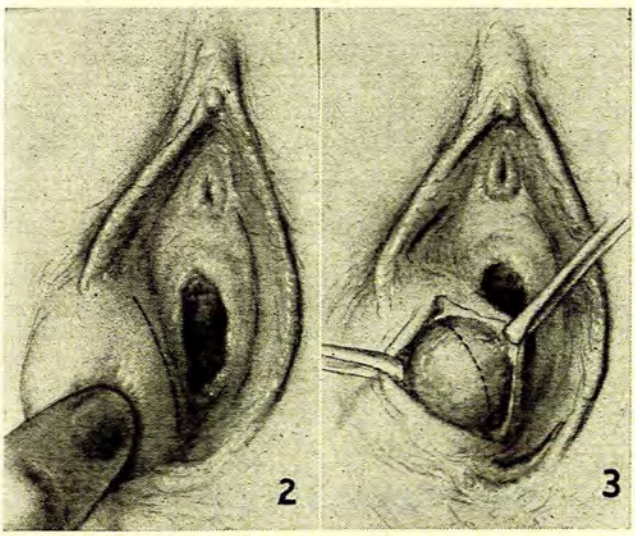

Fig. 2. In the technique of marsupialization for cyst or abscess of the Bartholin gland, as designed by Jacobson,[4] the initial incision—down to but not into the sac—is near the site of the original ostium.

Fig. 3. In the marsupialization technique of the Bartholin gland the mucocutaneous layer is carefully dissected off to expose a fairly large area of the gland sac. The sac is then opened along the dotted line as indicated. The edges of the sac are then grasped with clamps—*before* it collapses—and the contents flushed out with saline in a syringe. Especially in the small or acute gland, identification and control of the sac are most important from the beginning of the operation.

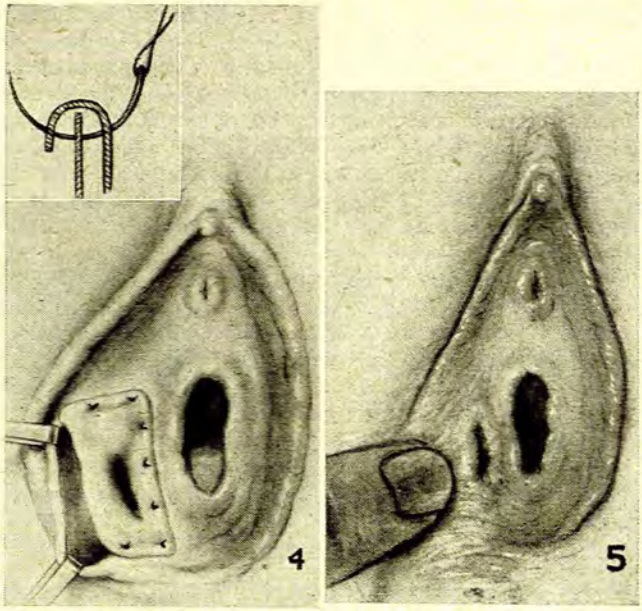

Fig. 4. For proper marsupialization of the Bartholin gland the periphery of the lining sac must *completely* cover the mucocutaneous edges by employing the author's modification of Jacobson's technique.[4] Note (see inset) that the fine catgut suture passes first through the sac, then through the mucocutaneous edge and finally through the sac again a short distance from its edge. As seen, the formerly distended gland duct is now a shallow cavity the mucous lining of which is continuous with the surface of the labium. There can be no contact of healing skin surfaces. (Author's modification of Jacobson's Fig. 3.[4])

Fig. 5. The new and permanent physiological ostium of the Bartholin gland several weeks after the operation of marsupialization (or after Davies' method[3]). The adjacent surface receives the lubrication through the new ostium of the regenerated duct.

Under local anesthesia (which suffices in most cases) a vertical incision about 1 inch long is made close to the site of the original ostium or, if the os cannot be identified, about 1 cm. lateral to the hymenal ring (Fig. 2). The skin or mucocutaneous structure is dissected from over the sac, care being taken not to rupture the sac. Another vertical incision about 1-inch long is then made in the cyst (Fig. 3). As the fluid exudes the cut edges of the cyst wall are grasped with appropriate clamps *before* the gland collapses. In the small gland, especially if acute, identification of the sac after it collapses may be quite difficult. Where there has been much scarring due to previous rupture it is best to make the initial incision into the cyst. Saline may be used to flush out the pus or fluid, and also to help to identify the cyst wall. If the operator loses control of the sac the operation will very likely be a failure.

If the gland has collapsed from previous spontaneous rupture some time before the operation, location of the 'hole', and hence the sac, will be greatly facilitated by flushing the area with saline, rubbing with the soaked sponge, and free use of the probe and small clamps.

While the clamps hold open the cyst cavity its edges are attached by several interrupted fine catgut sutures (Fig. 4). In order that the mucosal lining of the cyst may *completely* cover the mucocutaneous edge, the suture must pass first through the sac mucosa, then the mucocutaneous edge, and

again through the sac a little distance from its edge (inset of Fig. 4). When, as originally designed by Jacobson, the mucocutaneous edge is merely attached to, but not completely covered by, the gland mucosa, the exposed skin of the 'double' edge may make contact with its opposite and so encourage closure of the ostium. This contact is one cause of failure of the operation; hence the author's modification of the original procedure. Some operators do not pack the cavity. However, this author (Lowrie) makes a practice of packing the cavity with a small piece of rubber drain, which is held by suture. The end of the drain protrudes through the new ostium and may fall out when the sutures absorb. The patient is observed for 5 or 6 weeks, at the end of which time involution will have taken place. The new functioning ostium, usually 0·5 — 1 cm. in diameter, will be evident and the labium will be moist from secretion (Fig. 5).

Some operators prefer nonabsorbable sutures, which can be removed several days later. However, unless the ends of these sutures are left long, pain and edema may render removal quite difficult.

END RESULTS

As yet we have no documented follow-up of a large series. At St Vincent's Hospital in New York where, with the cooperation of our director, this author introduced the operation in 1955, we have to date had 60 cases. The new technique of marsupialization is now being used widely throughout the country. Since the original publication by Jacobson[4] in 1950, authors such as Tancer *et al.*,[5] von Friesen[6] and Wilder[7] have published their very favorable results. When the operation is performed with the amended technique noted herein, failure is relatively unknown.

SUMMARY AND CONCLUSIONS

1. The time-honored surgical techniques employed in cyst or abscess of the Bartholin gland not only exhibit flagrant violations of basic anatomical and physiological principles, but are also often followed by local defects such as deformity and faulty lubrication, which lead to unsatisfactory sex life and other unwelcome sequelae.

2. To eliminate the objections in the currently employed methods there is here presented a quite new type of technique, which can be simply, safely and rapidly executed, in which no tissue is removed, which can be performed in the acute or chronic Bartholin gland, in the pregnant or post-partum state, and for which hospitalization is usually not necessary. The incision for drainage of the distended gland becomes the new permanent and physiological ostium—created, preferably, by the principle of marsupialization.

3. The author would amend the original Jacobson[4] technique as herein noted:

(*a*) The gland sac—especially in the small or acute gland—must be identified *early* and kept everted throughout the operation.

(*b*) Closure of the ostium, possible from contact of the raw exposed peripheral edges, is practically eliminated when the smooth lining of the gland sac completely covers the mucocutaneous surfaces (Fig. 4).

(*c*) Continued patency of the new ostium is surer when the rubber drain is kept in for some time after the operation.

4. In view of the overwhelming advantages inherent in this new operation of marsupialization, should we not regard this innovation by Davies and Jacobson as a milestone, a veritable revolution, in surgery of the Bartholin gland?

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