

CALCULI REMOVED FROM CYSTS OF THE VULVO-VAGINAL GLANDS. By A. VICTORIA SCOTT, A. M., M.D., of Philadelphia. With Comments by ROBERT P. HARRIS, M.D., of Philadelphia.

THE extreme rarity of this form of calculus gives the case here reported an unusual degree of interest. Two small concretions in so unusual a location might readily escape detection, as these did, on the part of several physicians, and it was only by careful attention to the sensations and directions of the patient that they were at last discovered and removed.

Mrs. A. H., aged 49 years, a mulatto, spare-built, and a cook in a restaurant, has been a widow since the age of 21 years. She commenced to menstruate at the age of 16, and after passing through two periods, was married, giving birth after eighteen months to a daughter, who still survives. Five years after her marriage her husband died, and at the age of 43 she ceased to menstruate. Three months after the menopause she noticed a swelling in the right labium near the posterior commissure of the vulva, which became quite painful, extended up along the postero-lateral side of the vagina, and finally burst into this passage, discharging a quantity of fluid which appeared to be largely composed of blood. This abscess closed, but a stinging sensation continued afterward where it had formed.

In time an attack of the same nature occurred on the opposite side of the vulva, but the right side gave the greater amount of discomfort. After this, one abscess formed after another on either side; medical advice was sought, but the exact character of the disease in all its features was not discovered, it being masked by sensations and pains at remote points which directed attention elsewhere than to the vaginal wall. The woman complained of intense itching and burning in the vulva, pains in the back, groins, and lower part of the abdomen, with at times an irritating leucorrhœal discharge. When active inflammation was in progress, she experienced an acute pain in the cysts, which became severe upon pressure, and even a slight touch excited painful feelings in her back, groin, and on the outside

of the thigh of the corresponding side. These feelings were particularly marked upon the right side, and occasionally prevented the right lateral decubitus. She was also subject to attacks of urticaria, sciatica, and rheumatism. Her sufferings obliged her at frequent intervals to give up work and remain at home, and on one occasion she was disabled for eight months. Seeking relief she consulted a number of physicians, was under care in the clinic of the Woman's Hospital for a short time, and was also an out-patient for six months of the University of Pennsylvania.

Seventeen months ago she came to my office, when a vaginal exploration revealed the presence of two cysts, connected with the vulvo-vaginal glands, with a hard eminence on either side. As she declined the use of the knife at that time, I gave her some simple applications which afforded temporary relief.

In June, 1885, she returned, and expressed a willingness to undergo an operation. The vagina presented postero-laterally, on either side, a hard swelling. These varied, according to the state of the cysts, from the size of a pea to that of a shellbark, depending mainly on the amount of fluid collected, or the degree of inflammation present. The patient was led to find these "hard lumps" with her finger by the sense of pain experienced, and they were seated about two inches within the vagina. I discovered them to be centres of acute sensation, pains being set up under pressure in distant locations.

On July 2d, the woman being placed under the effects of ether by Dr. Caroline Peterson, I operated on her at her own home. With one finger in the rectum and another in the vagina, it was easy to determine that each swelling contained a hard, central, pea-like deposit. An incision brought the knife upon a calcareous body, contained within a capsule, which, being drawn out and opened, gave exit to a calculus of a white color, round and smooth. The right concretion was about $\frac{3}{8}$ of an inch in diameter, and the other $\frac{1}{8}$ of an inch. By drying they have diminished in size, due no doubt to the loss of fluid contained in their animal matter. Under the point of a needle they are hard and gritty, and may readily be scratched into powder. Their removal occasioned the loss of about a tablespoonful of blood. When the bleeding ceased, chromic acid was introduced into the cyst cavities. On the third day after the operation the patient claimed to feel less soreness than at any time in two years, and to be in a better condition than she has been in six. There still remain the two fistulous cyst cavities, which will probably refill and discharge; but the age of the woman should favor a treatment for their obliteration, as the functional activity of the glands must have largely diminished.

Dr. Robert P. Harris was kind enough to examine the patient, and to him I am much indebted for the following remarks and observations in reference to the case and the infrequency of this form of calculus.

The woman above referred to had undoubtedly a succession of attacks of inflammation, due at the commencement to the secretion of the glands of Bartholini having been retained, either by a stenosis of the duct, or partly contained in a cyst from the parenchyma of the gland, having no connection with the natural outlet, and more probably the latter, when we consider the age of the subject and the peculiar direction taken by the cyst-growths in their enlargement; a direction quite unusual in this vulvar disease. On some occasions when the cysts burst the discharge appears to have been simply the yellowish-white secretion natural to these glands; in others the fluid is described as brownish, which we know from other cases is due to an admixture of blood; and then again it was purulent, pus being added to the glairy secretion.

In young women, cystic growths of Bartholini's glands are due in a large proportion of cases to stenosis of the duct. The closure causes the infundibular portion of this conduit to dilate into an oval sac, which in some cases becomes spherical and in others pyriform, as it enlarges, and the size even of a hen's egg may be attained in some extreme cases, interfering very much with locomotion, as the thighs cannot be brought together without producing pain. The direction of enlargement is either along the labium toward the anterior commissure, or outward under the femoro-vulvar sulcus; the cyst may lie under either the labium majus or the nympha. But in the older woman under observation, the swelling, as described to me by her, commenced near the posterior commissure, exactly over the region occupied by the gland-duct of the right side, and extended along the vaginal wall, where it opened spontaneously. When the disease occurred on the opposite side, the extension was in the same direction. This form of extension is mentioned by Schroeder, in vol. x. of Ziemssen's Encyclopædia, in which he says: "The cysts of the glands of Bartholini are the most common of the cysts of the vulva. They may spring either from the excretory duct, or from the gland itself. In the former case they are oblong at first, and become afterward round, while those of the gland itself grow to a large size and exhibit occasionally a lobular form. They are situated in the labium majus, in the region of the gland or of its excretory duct, *though exceptionally*, and, as shown by Hoening, *they may extend up along the side of the vagina* into the true pelvis and even beyond the vaginal cul-de-sac."

Calculi formed in such cysts, from materials held in solution in the gland secretion, are of very great rarity, so much so that I cannot find any mention of such a disease, although I have examined a large number of works upon anatomy, surgery, and the diseases of women.¹ Nor can I find among our leading gynecologists any one who has had a case or has

¹ M. Boys de Loury (*Revue Médicale*, March, 1841) mentions a form of fibrous cyst, having a thick and solid wall, in which osseous or gypsum-like plates have been found.

heard of one. Thus far, Mr. Lawson Tait is the only one who has removed such a calculus, which he writes me he did some years ago.

Nor in any work giving analyses of the minor concretions of the human body do I find any notice of this one. We find mention of calculi obtained from the salivary ducts, or found in the gland structure; of others located in the tonsil, prostate gland, the mesenteric glands, and even in the pericardium, eyeball, and nose. Huguier, of Paris, wrote the most thorough treatise upon the diseases of the secretory glands of the vulva that has ever appeared in any country, and presented it before the National Academy of Medicine in 1846. In the *Mémoires* of this Society published in 1850, it occupies 325 quarto pages, much the larger portion of which is devoted to the diseases of the vulvo-vaginal glands, and is handsomely illustrated by lithographic plates; but there is no mention made of any concretions. The author of this monograph had abundant opportunities for observation in a city where the morals of young women would appear from his reports to favor the production of disease in the glands of Bartholini; he made dissections of the diseased structures, and reported a large number of clinical cases. His classification of the non-specific diseases of these glands is as follows: 1. Simple hypersecretion; 2. Muco-purulent secretions; 3. Engorgement or chronic inflammation; 4. Induration and fibrous degeneration of the gland; 5. Acute inflammation of the follicular body; 6. Abscess of the parenchyma; and 7. Abscess of the excretory cavity. To these we may add an 8, Atrophy and absorption of the gland tissue. Simple hypersecretion belongs to the active functional period of these glands, which, in the experience of Huguier, is from the age of 18 to 27. He had rarely met with a diseased gland under 17 or above 45; where seen at 50, the affection had long existed.

The vulvo-vaginal glands are almost universally called the glands of Bartholini, after Caspar Bartholinus or Bartholini II. of Copenhagen. They are sometimes given the name of Duverney or of Méry. There were three of the Bartholini family who were all anatomists, and all wrote medical works, but the third was most devoted to anatomical researches. They were Caspar I., Thomas his son, and Caspar II. son of Thomas and grandson of Caspar I. Danes by birth, they were cosmopolites in their residence, studies, and knowledge of languages, being fond of travel, and quite at home in Germany, Italy, and France. Caspar II. was led, by the celebrity of Dr. Joseph Guichard Duverney, 1648-1730, of Paris, to go to that city to complete his medical education, and especially to enjoy the advantages afforded for the study of anatomy under this celebrated teacher, who graduated at Avignon when only 19, and was at the time under 28 years of age. Here he graduated as M.D. in 1678; but, before he obtained his degree, he published at Rome, in 1677, his little book *De Ovariis Mulierum et Generationis Historia*, in which is

the first account of the racemose glands which bear his name. This work was republished in Amsterdam in 1678, in Nuremberg in 1679, and in Lyons in 1696, but is at the present day one of the most rare of the many works of the three Bartholinis. The anatomical plates of Duverney, in which the location of the glands is indicated, were not published until much later. Méry was an enthusiastic student of anatomy, and a cotemporary of both Bartholini and his preceptor (1645-1722), but has no claim to the discovery. Dionis,¹ an associate of Duverney, evidently did not know the source of the secretion furnished by these glands, which he attributed to *lacunæ* near the urethra.

During its period of functional activity, the gland of Bartholini is capable of secreting, notwithstanding its diminutive size, a large quantity of fluid, which has to escape through a duct only of sufficient calibre to admit an eye-probe. Located as it is, and subject to the effect of inflammation originating in neighboring tissues, it is not to be wondered at that the excretory duct is liable to stenosis, resulting in an accumulation of secretion between the gland and the point of closure. Where the canal is still pervious, the patient may relieve the discomfort of tension by emptying the cyst under digital compression; but where entire closure has taken place, the knife alone can give relief, or a spontaneous evacuation will take place by ulcerative action. As these glands are usually unequally developed, it is rare to find both of them affected at the same time. Huguier gives in his plates one example where the stenosis was bilateral. Such a marked case, if occurring centuries ago, one would suppose might have led to the discovery of these long-overlooked glandular bodies.

August 3, 1885. My attention was called to-day to the condition of Mrs. H., whose physician is absent, and who is under the care of another. She was fully relieved for a few days by the removal of the calculi, but now is suffering from the discomfort of the discharging fistulæ which will require special treatment for their obliteration. Excision of the cysts is not to be recommended, as cases have been cured without a resort to the knife, and the vascularity of the parts involved makes it advisable to resort to more simple measures. As tincture of iodine has failed in this case and many other cases, and as a number have now been radically cured by injections of chloride of zinc in strong solution after failure with the iodine, this plan of Lizé,² Duvernoy,³ and others will be given a trial. Lizé's injection consists of 50 centigrammes ($7\frac{3}{4}$ grs.) of chloride of zinc, and 5 grammes of distilled water, or 1 part to 10. Of this solution Duvernoy used but six drops, by hypodermic syringe, and a cure was effected. The *tube à drainage* of Chassaignac has also been successfully

¹ Treatise on Midwifery, English Translation, pp. 42 and 105, 1719.

² Bulletin et Mém. Soc. de Chirurg. de Paris, 1876, N. S. II. p. 129.

³ Annales de Gynéc., 1880, xiii. pp. 251-254.

employed, as has the elastic ligature. The locality of the fistulæ in the present case may make it one of unusual difficulty to treat successfully.

As quite a number of physicians had failed to detect the calculi in this woman, whose own sensations finally led to the form of examination which discovered them, I asked her why it happened; and she replied that they interrupted her before she had fully explained to them her case as indicated through her feelings, when certain sensitive points were touched, those chiefly noticed being the points of hardness already referred to.