Aspiration and Tetracycline injection sclerotherapy of vaginal and vulval gartner cysts.

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Summary : Surgery has been the most common treatment procedure performed to treat Gartner duct cysts but it has been associated with a large number of complications. Hence to avoid the complications we used the technique of tetracycline injection sclerotherapy of these cysts. The procedure consisted of aspiration of the cysts fluid and then injection of the same volume of 5% tetracycline solution into the cyst.

A total of 50 patients having vulval and vaginal Gartner duct cysts were studied for a period of one year in the Department of Gynaec & Obstet, SMGS Hospital, Govt. Medical College, Jammu. 96.5% of patients required single injection of tetracycline for complete remission. One patient (1.75%) required 3 procedures for cure while 1 patient (1.75%) had failure with reformation of cyst after 3 repeated procedures. This study has shown that this procedure is safe, cost effective and an office procedure with negligible recurrence and post operative complications. This technique offers a large number of advantages over conventional surgery done for the treatment of cysts. Hence the procedure is strongly recommended.

Introduction

Gartner duct cysts located in vulva or vagina may present with dyspareunia, disfigurement, dystocia, infertility, a sense of mass or fullness in the vagina and fear psychosis. At times these may become infected leading to recurrent abscesses and such patients present with fever, pain, tenderness and toxaemia while those with persistent sinuses present with discharge per vaginum. Most of them are benign but rarely malignancy has also been reported (Hinman et al 1960.)

The most common treatment has been surgery, either in the form of enucleation or marsupialisation. One of the major complications associated with surgery is haemorrhage during surgery because of the rich blood supply of the vagina and vulva (Abd-Rabbo and Atta 1991). Other complications associated with surgery are genitourinary fistulae, sexual frigidity, loss of orgasm, infection and dyspareunia. Surgery requires hospitalisation with added risks of general or spinal anasesthesia.

The present study of injection sclerotherapy was undertaken to evaluate its efficacy over conventional surgery.

Material and Methods

The present study was conducted in 50 patients having vulval and vaginal Gartner duct cysts in the Dept. of Gynaec & Obstet, SMGS Hospital, Govt.Medical College, Jammu commencing Jan. 1994 to Jan. 1995.

The procedure was performed in lithotomy position in minor O.T. without any premedication. Under all aseptic precautions the cyst fluid was aspirated with Argyl Medicut No.18 gauge cannula through bloodless area of the cyst wall.(Sherwood medical Industries, Ireland)

Then a similar volume of 5% tetracycline solution (Injection terramycin, Pfizer) was injected into the cyst through the same medicut cannula. The patient was kept under observation for one hour and then discharged without further medication.

After 24 hours, the injected solution was aspirated completely until the cyst walls had collapsed and slight compression was applied for a few minutes.

Follow up

The patient was initially followed up after one week, then at monthly intervals for 6 months to check the results.

Observations

The majority of patients (42%) were in the age group of 31-35 years with a mean age of 32 years. Maximum number of patients were para 2 constituting about 42% of the total patients. Majority of patients (29.8%) presented with a sense of mass or fullness in the vagina. 26.3% had dyspareunia, 19% complained of disfigurement and 13.7% had fear psychosis. Majority (68%) of patients presented within 2-4 months of symptoms.

The number of cysts in a patient varied from 1 to 3. Majority of patients (86%) had single Gartner duct cyst; 12% had 2 while only 1 patient (2%) presented with 3 cysts.

Maximum number of cysts (40%) were located in the middle third of vagina while 30% in the lower third and 25% in the upper third of vagina.

In majority of cysts (53.4%) the size ranged from 4-6 cm. Size of the cysts varied from 2-9 cm with a mean diameter of 4.1 cm.

In majority of patients (34.4%) the volume of fluid aspirated was 11-15 ml. Eightyone % of cysts had bluish yellow fluid.

Table - I

Distribution of patients according to results of injection sclerotherapy.

Result	Number of Injections	Number of cysts	Cure-Rate (percentage)
Complete cure	1	56	96.5
Complete cure	3	1	1.75
Failure	3	1	1.75

As shown in Table 1, majority of patients (96.5%) were cured with single injection therapy while one patient needed 3 injections for complete cure. Another 1 patient had failure of treatment with 3 injections after 6 months follow up and needed surgery.

Table – II

Distribution of Patients according to complications

Complication	Total number Of cysts	percentage
Pain	1	1.75
Necrosis with slough	1	1.75
Recurrence	1	1.75

As shown in table II, 1 case presented with pain after injection scerotherapy and was relieved with non-steroidal antiinflammatory analgesics. Another patient developed post-injection necrosis and sloughing of the cyst wall and was relieved with a course of antibiotics for 1 week. One patient after 6 months follow up needed surgery due to recurrence of the cyst.

All the 50 patients were observed for 1 hour in the hospital after the injection sclerotherapy and no untoward incidence was seen during this period.

Discussion

Large and symptomatic Gartner duct cysts need treatment. The most common treatment procedure done too frequently had been surgery, either in the form of enucleation marsupialisation (Beresford, et al 1977). The disadvantages of surgical treatment is a high incidence of complications.

The present technique of aspiration and injection sclerotherapy was devised for the first time in Gartner's duct cysts by Abd – Rabbo and Atta in 1991. It is not associated with any complication inherent to surgery. Among the various sclerosants used by different authors, tetracycline has the advantages of being inexpensive, antibacterial and a well proved sclerosant. The sclerosant action of tetracycline is believed to be due to its acidic pH which causes strong tissue irritation with cellular foreign body reaction leading to destruction of secretory cells within the cysts and adhesion of its walls (Rubinson and Bolloki 1972, Bodker et al 1985.)

In the series of Abd-Rabbo 1991, all the 15 patients had a single cyst, while in our study 86% of the patients had

single cyst, 12% percent had 2 and 2 percent had 3 cysts. The average size of the cysts in Abd-Rabbo and Atta's study was 4 cm which was similar to that of our study.

Various authors reported their results using different sclerosing agents in the injection sclerotherapy of hydrocoeles and spermatoceles. James (1941) reported pain in 2%. Maloney (1975) reported infection in 1.6%. There was no complication from any patients in the Abd-Rabbo and Atta's series. In the present study one patient (1.75%) presented with pain when she reported 24 hours after injection but she was relieved with non steroidal antiinflammatory analgesics. Another patient (1.75%) presented with necrosis and sloughing of the cyst wall but she was cured after a course of antibiotics.

In the Abd-Rabbo and Atta's study, there was no recurrence but follow up in the present study revealed 2 cases (3.5%) in which there was reformation of cysts one week after initial treatment. However, the amount of fluid reaccumulated was less then the initial amount in these. The procedure was repeated in both twice further. One of them was cured while the second one had to be treated by surgery after 6 months follow up amounting to failure rate of 1.75%. It may be because his study consisted of small number of patients. Our findings are same as those of Ewell et al (1940), Foote (1943), Nash (1979) and Nash (1984) who reported recurrence rate, of 2.5% after injection sclerotherapy in hydrocoeles and spermatoceles.

The present technique of injection sclerotherapy is a cost effective, safe and simple office procedure with no risk of injuring important structures. It needs no prophylactic antibiotic and allows a rapid return to full sexual activity. This procedure is acceptable to all the patients with negligible recurrence or post operative complications. Also performance of this procedure does not require the services of a skilled surgeon, eliminates the various hazards associated with blood transfusion and avoid psychological trauma of surgery. This procedure of aspiration sclerotherapy is therefore strongly recommended.

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