

# Needle Aspiration and Syndromic Management of Bartholin's Abscess

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## ABSTRACT

A series of Bartholin's abscesses was managed on an outpatient basis by needle aspiration followed by triple antimicrobial therapy. The presence of *Neisseria gonorrhoea* was evident in 27.8 per cent of the cases. Based on the premise that Bartholin's abscess is to be treated as a sexually transmitted disease (STD), the choice of antimicrobials was made in line with the syndromic management of STDs. All the patients were reviewed after one week, and two-thirds of them after six months. There was no long-term recurrence among the women who returned for follow-up. Client satisfaction was excellent. The procedure provides immediate relief, avoids hospitalisation and related costs, as well as the morbidity resulting from traditional surgical approaches. (*Afr J Reprod Health* 1999; 3 [1]:103-108)

## RÉSUMÉ

Aspiration à l'aiguille et approche syndromique de l'abcès de la glande de Bartholin. Une série d'abcès de la glande de Bartholin fut traitée par aspiration suivie d'une antibiothérapie triple. La présence de *Neisseria gonorrhoeae* fut identifiée dans 27.8 pour-cent des cas. Sur la base de l'hypothèse que l'abcès de la glande de Bartholin est une maladie sexuellement transmissible (MST) le choix des antibiotiques fut celui utilisé pour l'approche syndromique des MSTs. Toutes les patientes furent revues après une semaine, et deux tiers se présentèrent au contrôle après six mois. Il n'y avait pas de récurrence à long terme. La satisfaction des clientes était générale. Ce type de traitement assure un soulagement immédiat tout en évitant le coût et la morbidité liés à l'approche chirurgicale classique. (*Rev Afr Santé Reprod* 1999; 3 [1]:103-108)

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KEY WORDS: *Bartholin's abscess, needle aspiration, sexually transmitted disease, syndromic management*

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## Introduction

Opinions differ regarding the spectrum of microorganisms associated with Bartholinitis/ Bartholin's abscess. Management protocols recommended for the treatment of Bartholin's abscess vary with regard not only to the need for surgical drainage (viz, incision and drainage or marsupialisation) and/or antimicrobial therapy, but also the sequence thereof.<sup>1-5</sup>

We report a series of Bartholin's abscesses managed on an outpatient basis by needle-aspiration and triple antimicrobial therapy aiming at *Neisseria gonorrhoeae*, *Chlamydia trachomatis*, and anaerobes. The rationale of the management protocol is based on the premise that Bartholin's abscesses are a sexually transmitted disease (STD) and should be treated as such.<sup>3-4</sup> In order to find out whether this view is correct and reflects the microbiologic findings, we investigated the associated microorganisms in a series of 36 cases, which were followed up after treatment.

## Methods

A series of 36 consecutive women presenting with a Bartholin's gland abscess at the gynaecologic outpatient department entered the study. After informed consent had been obtained, the surface of the abscess was cleaned with an antiseptic solution and sprayed with ethyl chloride. An 18-gauge needle attached to a 20ml syringe was used to aspirate the pus. After completion of the procedure, part of the content of the syringe was expelled on a cotton-tipped sterile swab that was immediately placed into a transport medium.

Without delay, specimens were sent to the laboratory for plating. Cultures for *Neisseria gonorrhoeae* were carried out on a modified Thayer-Martin medium. A presumptive diagnosis of *Neisseria gonorrhoeae* was made based on colonial morphology — Gram stain and oxidase positivity — but because of the lack of diagnostic facilities at the time of the study, the presence of *Chlamydia trachomatis* could not be investigated. At the end of the procedure patients were given

a single oral dose of 500mg ciprofloxacin for *Neisseria gonorrhoeae*, doxycyclin 100mg twice daily for *Chlamydia trachomatis*, and metronidazole 400mg three times daily for anaerobes, both for 10 days.

The patients were informed about the high probability of having been infected by their sexual partner(s), in the same manner as in routine cases of pelvic inflammatory disease. In view of the local conditions, especially of migrant labourers, contact tracing is often impossible; prevention of recurrent STDs is mainly a matter of counselling. The patients were informed that partner(s) should attend a STD clinic. Blood was drawn for syphilis serology, as it is a standard procedure in all cases of STDs. The HIV status was not tested. The patients were asked to come for follow-up one week and six months after.

## Results

The microbiologic findings are listed in Table 1. *Neisseria gonorrhoeae* was identified in 27.8 per cent of the cases. All the patients returned for the one-week follow-up. Only one showed a residual small pus collection, which was re-aspirated. All expressed satisfaction with the procedure. Only 24 came back after six months. There was no case of recurrence amongst them. Healing was achieved without scarring or dyspareunia.

## Discussion

Reviewing the literature back to 1990, we were able to find only three publications on Bartholin's gland pathology. One presented a so-called "window operation" as an allegedly novel modification of the traditional marsupialisation.<sup>6</sup> The latter, however, had already been reported earlier by Friederick,<sup>7</sup> who saw no merit in it. Andersen *et al*<sup>8</sup> reported on marsupialisation versus primary suture of Bartholin's abscesses. Yuce *et al*<sup>9</sup> published a series where a silver nitrate stick was inserted for 48 hours into the cyst/abscess cavity to coagulate the bleeders in order to avoid sutures.

Table 1: Microbiologic findings in 36 cases of Bartholin's abscess

Microorganism	Alone	Associated
<i>Staphylococcus epidermidis</i>	2	4
<i>Staphylococcus aureus</i>	4	-
<i>Escherichia coli</i>	4	4
<i>Neisseria gonorrhoeae</i>	10	-
<i>Candida</i>	4	-
No growth	4	
Total	28	8

Table 2: Spectrum of microorganisms associated with Bartholin's abscess

Author(s)	<i>Staphylococcus</i> <i>spp.</i>	<i>Streptococcus</i> <i>spp.</i>	<i>H. influenzae</i>	<i>E. coli</i>	<i>Proteus</i> <i>spp.</i>	Anaerobes	<i>N.gonorrhoeae</i>	<i>C. matis</i>
Blaustein <sup>15</sup>						(+)	(+)	
Oriel & Ridgway <sup>16</sup>							(+)	(+)
Roberts & McCullough <sup>17</sup>	(+)	(+)	(+)				(+)	
Kaufman <sup>1</sup>							(-)	
Sweet & Gibbs <sup>18</sup>							56.7%	30.0%
Friersen & Mills <sup>19</sup>							17.0%	
Andersen <i>et al.</i> <sup>8</sup>		(+)	(+)		(+)	(+)		
Fish <sup>20</sup>							(+)	
Feliciano & Feliciano <sup>21</sup>							(+)	
Rein <sup>22</sup>						90.0%	28.0%	
Woodruff & Forster <sup>2</sup>							20.0-30.0%	
Zenilman <sup>14</sup>	rare	(+)	rare	(+)	(+)	(+)	(+)	
Hernandez & Atkinson <sup>23</sup>							(+)	
Bonellie <sup>11</sup>	(+)			(+)	(+)	(+)	1.9%	

The first report on needle aspiration of Bartholin's cysts and abscesses was a study of 34 cases by Cheetham,<sup>10</sup> in 1985. The author

claimed an overall cure rate of 85 per cent after a ten months' follow-up period. In 1986, Bonellie<sup>11</sup> presented a series of 52 cases (nine cysts

and 43 abscesses) treated with large bore needle aspiration, and compared the recurrence rate with 182 retrospectively studied cases of marsupialisation. The recurrence rate of cysts was 2.5 per cent after marsupialisation, and 22.2 per cent after aspiration. The recurrence rate of abscesses was 7.9 per cent after marsupialisation, and 20.9 per cent after aspiration.

Among our patients who were seen for follow-up, the recurrence rate was low; however, since one-third did not return for control, the failure rate might have been anywhere from zero to 33.3 per cent. Notwithstanding the latter possibility, it is our belief that the low recurrence rate among the patients who did return might be attributed to the anti-microbial management that was prescribed. One could, however, argue whether the antibiotics do achieve an optimum local level in view of the locally compromised vascularisation. But this will apply as well to marsupialisation. Incomplete evacuation of pus and microorganisms might also leave the door open to recurrence.

Publications prior to 1990 have also focused mainly on the surgical and post-operative management of Bartholin's abscesses.<sup>12,13</sup> A consensus, however, has not yet been reached whether and when an incision and drainage should be performed, if at all. According to Kaufman,<sup>1</sup> marsupialisation should be deferred until 'cyst' forms. Woodruff and Foster<sup>2</sup> also held the view that marsupialisation should be done only if a residual 'cyst' is formed. Finally, Zenilman<sup>14</sup> stated that failure to respond to antimicrobials alone necessitates surgical drainage.

The role and type of antimicrobials have received little attention. Andersen *et al*<sup>8</sup> mentioned the use of broad spectrum antibiotics, but without further specification. Cho *et al*<sup>6</sup> prescribed ampicillin; they did not report on the associated microorganisms. Bonellie<sup>11</sup> found a predominance of *E. coli*, followed by most of the common vaginal commensals; the antimicrobials that were prescribed were mainly the association of doxycycline and metronidazole. Most of the available information on the mi-

croorganisms associated with Bartholin's abscess, listed in Table 2, were retrieved from textbooks. It indicates that the spectrum is wide and the normal vaginal microflora is often present. Of significance is the fact that the presence of *Neisseria gonorrhoeae* is reported in up to 56.7 per cent of the cases,<sup>18</sup> and is mentioned by the majority of authors. Although less common, the presence of *Chlamydia trachomatis* is reported in up to 30 per cent of the cases.<sup>2</sup> The present study confirms the common involvement of *Neisseria gonorrhoeae* (27.8 %).

Our choice of antimicrobials was based on the World Health Organization<sup>24</sup> recommendations, as well as on the guidelines issued by the South African Department of Health.<sup>25</sup> The latter are both based on the principles of a syndromic approach of STDs, taking into account sensitivity patterns as well as cost factors. One might argue against the use of doxycycline for two reasons. First, one of the tenets of the syndromic management is to administer, when possible, single dose treatments in order to ensure compliance and to limit the spread of STDs. Secondly, single dose alternatives such as azithromycin or ofloxacin are active against both *Neisseria gonorrhoeae* and *Chlamydia trachomatis*, and could be used where available. This would increase the compliance and cut short the possible gastrointestinal side effects of doxycycline. Our choice of antimicrobials does not preclude the other alternatives.

In view of the literature, as well as of our data, we believe that the syndromic management of Bartholin's abscess is justified. The syndromic approach to treating the spectrum of pathogens usually involved in a sexually transmitted infection with the spectrum of antimicrobials directed against the different pathogens without laboratory investigations is recommended by the World Health Organization.<sup>24</sup> Moreover, this type of approach applied to Bartholin's abscesses is, in our view, highly likely to prevent treatment failures, whatever the type of surgical management — aspiration or marsupialisation.

There is now more and more evidence that Bartholin's abscesses should be viewed as part of the spectrum of STDs. The risk profile of this condition is similar to that of most STDs.<sup>27</sup> STD pathogens are present not only in the Bartholin's abscess, but also in endocervix and vagina.<sup>28</sup> The latter study, also from South Africa, showed the presence of HIV antibodies in 30 per cent of the cases. This, however, might not be specific of Bartholin's abscesses, since a similar prevalence of HIV antibodies is detected in women attending antenatal clinics in the province of KwaZulu-Natal, where the study was performed. The Mpumalanga Province has a similar prevalence of HIV positivity.

Earlier studies<sup>29-31</sup> have raised concern about the risk, although limited, of necrotising fasciitis arising from a Bartholin's abscess. This potentially life-threatening complication would favour more radical approaches such as total excision of the abscess, or local destruction by silver nitrate application. This argument, however, would also militate against marsupialisation, which is a method of drainage and does not excise the abscess.

In developing countries, where diagnostic facilities are not readily available and where health budgets have to be used and channelled cautiously and wisely, the value and importance of the syndromic approach and management of STDs are well established. For unknown reasons, the Bartholin's abscess does not appear among the classical clinical manifestations of STDs. There is, however, little doubt that in many cases it is a real STD. One of the main thrusts of the syndromic approach is to treat the condition as much as possible in a single session. It is our belief that our approach of Bartholin's abscesses as a STD is justified and that it fulfils the requirements of a syndromic management. In addition, the described outpatient procedure is well accepted by the patients, highly effective, safe and cost saving. It may be recommended as the first-line procedure in the management of Bartholin's abscess.

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