Management of Bartholin duct cysts and abscesses: a systematic review
Wechter ME, Wu JM, Marzano D, Haefner H

CRD summary
The review assessed the effectiveness of interventions for Bartholin duct cysts and abscesses in terms of healing and recurrence. Benefits of treatment were detected. The authors concluded that insufficient evidence made it impossible to identify the best treatment. Inadequate reporting of the review process made evaluation of reliability of the evidence difficult, but the authors’ conclusions appear broadly reliable.

Authors' objectives
To review evidence on healing and recurrence of Bartholin duct cysts and abscesses after treatment.

Searching
PubMed, EMBASE, CINAHL, LILACS, Web of Science, the Cochrane Library and POPLINE were searched from 1982 to May 2008. The search was restricted to studies in English. Search terms were reported. Reference lists of retrieved papers were handsearched and experts were consulted for unpublished studies. An internet search was performed.

Study selection
Studies that included at least 10 participants on treatment of Bartholin duct cysts or abscess were eligible for inclusion in the systematic review. Interventions were varied: silver nitrate gland ablation; gland or duct fenestration, ablation or excision using carbon dioxide laser; marsupialisation or window operation; needle aspiration, without or without alcohol sclerotherapy; fistulisation using a Word catheter, Foley catheter or Jacobi ring; gland excision by traditional technique; and incision and drainage followed by primary suture closure. The main outcomes assessed were healing time and frequency of recurrence of duct cysts or abscess after treatment.

Case reports and studies on non-Bartholin vulvar pathology, Bartholin gland malignancy or Bartholin disorders other than cyst or abscesses were excluded.

The authors did not state how many reviewers selected studies for inclusion.

Assessment of study quality
Quality of the included studies was assessed using a validated quality assessment tool that incorporated study design, study size, methods used for randomisation and concealment of allocation, adequacy of definition of intervention and outcome, follow-up time and potential for bias in the included studies.

The authors worked together independently and collectively to evaluate study quality.

Data extraction
Mean healing time with standard deviation and frequency of recurrence of cysts or abscess were extracted. Where reported, p-values were extracted.

The authors did not state how many reviewers performed data extraction.

Methods of synthesis
Studies were combined in a narrative synthesis, grouped according to intervention.

Results of the review
Twenty-four studies (n=unclear) met inclusion criteria for the review: five RCTs; two cohort studies; and 17 case series.
**Silver nitrate**: Healing was usually accomplished within 10 days (two RCTs and four case series, n=143 patients). No abscess or duct cysts recurrence was observed in four case series, but two reported frequency of recurrence of gland pathology as 4% within two months of treatment. Compared with alcohol sclerotherapy, silver nitrate demonstrated slower healing (n=12 patients).

**Carbon dioxide laser treatment**: One retrospective cohort study reported an average healing time of 2.2 weeks; six case series reported healing time of three weeks to three months. Frequency of recurrence ranged from 2% to 20% (n=451 patients).

**Marsupialisation**: Treatment demonstrated a healing time of less than two weeks (one RCT). No recurrence was observed in any studies with marsupialisation. However, when compared with patients treated by incision and drainage before primary closure, patients with marsupialisation healed significantly more slowly (one to 21 days versus three to 11 days, p<0.05). There was no significant difference in abscess recurrence.

**Needle aspiration**: Healing occurred within one week (one study). Recurrence ranged from 0 to 38% at six months (n=96 patients). Compared with alcohol sclerotherapy, needle aspiration was associated with more than twice the frequency of recurrence. All patients who received alcohol sclerotherapy had their abscesses healed within one week. Recurrence rate was 8% to 10% at seven months (two studies).

**Fistulisation**: Treatment took three weeks for healing to occur (one RCT) and recurrence occurred in 4% to 17% of patients at six months (n=111 patients).

**Gland excision**: Frequency of recurrence was 0 to 3% (n=168 patients). Adverse events were uncommon in all interventions and when they occurred were not life threatening.

### Authors' conclusions
There were multiple interventions for Bartholin duct cysts and abscesses. The review failed to identify the best treatment approach.

### CRD commentary
The review assessed evidence on available interventions for Bartholin duct cysts and abscesses in terms of healing time and frequency of recurrence after treatment in an attempt to identify a first-line treatment. The search included appropriate electronic databases. The authors attempted to minimise bias and errors during the review process by selecting studies, extracting data and assessing the quality of included studies independently, although the number of authors who carried each process was not stated. Validity was assessed using a quality assessment tool with nine key quality domains, although no details of how each domain was assessed were reported. Basic statistics were used to pool data. The restriction to English-language studies and exclusion of 12 studies in other languages raised concern about publication bias. Inadequate reporting of the review process precluded a thorough evaluation of the reliability of the evidence. The lack of firm conclusions by the authors on the efficacy of these interventions reflected limitations in the primary evidence and the methods of the systematic review.

### Implications of the review for practice and research
**Practice**: The authors did not state any implications for practice.

**Research**: Large randomised controlled trials that compared common therapeutic strategies were needed to establish the best available treatment for Bartholin duct cysts and abscesses.

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