UNDERSTANDING THE IMPACT OF VAGINITIS MANAGEMENT ON PATIENT SATISFACTION AND QUALITY OF LIFE – A SYSTEMATIC REVIEW OF QUALITATIVE AND QUANTITATIVE EVIDENCE

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MODIFIED ABSTRACT

Background: Vaginitis and vaginosis (V/V) are among the most common conditions that lead women to seek care. However, there is limited published evidence on patients’ quality of life impact for vaginitis symptoms and management. A hypothesis was made that current management of V/V is insufficient, negatively impacts women’s quality of life significantly, and needs to be improved. A systematic review was undertaken to support or disprove this hypothesis.

Methods: A systematic review was conducted, using the PubMed and MeSH databases. Three search string results were used after selecting for only human-related, full-text-available studies in English.

Results: 11 articles met inclusion criteria; of the 11, 4 were quantitative, with 2 sharing comparable metrics for comparison, with the remainder being qualitative.

The following key themes were summarized from the qualitative results:

- 1) Many women were dissatisfied with current clinical management of V/V,
- 2) Poor management leads to negative clinical outcomes,
- 3) V/V has a negative and significant impact on Health-related Quality of Life (HRQoL), and
- 4) Clinical and general management of V/V can be improved with better diagnosis and education

The quantitative results revealed an impact on quality of life via EuroQol-5 dimension (EQ-5D) and Short Form (SF)-36 scores, where women with a type of recurrent vulvovaginal candidiasis (RVVC) were more likely to experience poor quality of life and loss of productivity.

Conclusions: The impact of V/V is reported as both significant and negative. Improved diagnosis and management are suggested for improvement in patient satisfaction and quality of life. Clinicians could consider new diagnosis methods with improved accuracy.

INTRODUCTION AND PURPOSE

Vaginitis and vaginosis (V/V) are among the most common conditions that lead women to seek care. However, there is limited published evidence on patients’ quality of life impact for vaginitis symptoms and management.

A systematic literature review was undertaken to help demonstrate the large burden of unmet need for Vaginitis Management. The literature review was specifically conducted to assess Quality of Life (QoL) and patient satisfaction for women with Vaginitis and Vaginosis (V/V) symptoms. Specifically, the hypothesis was that current management is insufficient, negatively impacts women’s quality of life significantly, and needs to be improved.

MATERIALS AND METHODS

A systematic literature review for patient satisfaction and quality of life for V/V management was conducted, using the PubMed and MeSH databases. Major search topics included papers with a major topic of Vaginitis, Vaginosis, Candidiasis, or Bacterial Vaginosis that looked at Patient Satisfaction or Quality of Life. There were three search strings used:

- ("vaginitis"[MeSH Major Topic] OR "vaginal diseases"[MeSH Major Topic] OR "candidiasis"[MeSH Major Topic] OR "vaginosis, bacterial"[MeSH Major Topic]) AND ("quality of life"[MeSH Terms] OR "patient satisfaction"[MeSH Terms])
- (Patient Satisfaction[MeSH Major Topic] OR Quality of Life[MeSH Major Topic]) AND (Vaginitis[Title] OR Vaginosis[Title] OR Candidiasis[Title])
- ((Vaginosis[MeSH Major Topic]) AND quality of life[MeSH Terms]) NOT "fistula" NOT "Atrophy"

The three search string results were cross referenced after selecting for only human related, full-text available studies. Of these, 52 were found to be cross-identified. Analysis of these 52 returned 11 potentially relevant results. Each of these 11 were then checked for associated key words and similar articles, no additional items of relevance were returned. Of the 11, 4 were quantitative, with 2 sharing comparable metrics for comparison, with the remainder being qualitative only. The 11 studies identified spanned multiple countries and continents, covering a timeframe from 1996 to 2016 (see Figures 1 , 2).

Figure 1. Diagram of Search

Figure 2. Diversity of Literature Review

Country	Number of Citations
US	2
UK	4
US and EU (France, Germany, Italy, Spain, Sweden)	3
Australia	1
China	1
Major Topic	Number of Citations
Health Related Quality of Life (HRQoL)	2
Quality of Life	2
patient management preference	2
RVVC	4
impact of vaginal symptoms	5
Recurrent BV	3

RESULTS

The major themes were supportive of the hypothesis around unmet needs in current V/V management. The following table summarizes the qualitative study key themes.

Table 1. Key Themes, Patient Satisfaction and Quality of Life due to V/V

Many women are dissatisfied with current clinical management of V/V	Many Women are dissatisfied with current clinical management of V/V
	Dissatisfaction with clinical management includes: inconsistency in advice, misdiagnosis and inappropriate diagnostic approaches and insensitive or dismissive attitudes.
Poor Management Leads to Negative Clinical Outcomes	Women resort unsuccessfully to self-treatment due to challenges in clinical management.
	Poor management results in continued symptoms , or infections becoming recurrent, causing psychosexual dysfunction and depression in many sufferers
VV has a negative and significant impact on HRQoL	Poor clinical management and high levels of mixed infections mean that women resorting to OTC care could be at risk of undiagnosed infections or complications
	women reported V/V had a considerable impact on their lives, making some of them feel 'dirty', embarrassed, depressed and stigmatized.
Clinical and General Management of VV can be improved with better diagnosis and education	Most Women reported a moderate to severe negative impact of V/V
	Women may feel more emotional stress, bodily stress, and impaired work and life factors from V/V
	Women are less familiar with BV than VVC (only 30% heard of BV vs 97% heard of VVC), so likely to assume they have VVC even when BV is more prevalent.
	Increased education and better diagnosis of these 2 conditions is needed to remove the stigma and taboo, especially for BV, and to ensure correct diagnosis with appropriate treatment.
	Many women expected to receive a vaginal exam for their symptoms but only about half actually did.
	Clinical management of BV could be improved through the use of standardized diagnostic approaches.

The quantitative analysis (see Table 2) revealed an impact on quality of life via EQ-5D scores and SF-36 scores, where women with a type of recurrent V/V (RVVC) were more likely to experience pain, depression, and productivity loss associated with their symptoms than the general population (Zhu et al. 2016; Irving et al. 1998; Payne et al. 2010; Aballéa et al. 2013). One study (Aballéa et al. 2013) found that up to 33 hours per year of productivity per patient were lost, resulting in average wage loss from 266 to 1,130 (euros) per person per year with RVVC. Comparing SF-36 scores for RVVC to that of other similar conditions, it was found that the average index score in women with RVVC is comparable to other diseases such as asthma or COPD and worse than diseases such as headache/migraine according to US and UK catalogs of index scores.

Table 2. Key Themes, Patient Satisfaction and Quality of Life due to V/V

	Aballea			Zhu		
	With RVVC	Normal (general population)	Difference	With RVVC	Normal (general population)	Difference
	EQ-5D			EQ-5D		
With Pain Score	63%	35%	28%			
With Anxiety/ Depression Score	53%	20%	33%			
Average Utility Score	0.7	.08-.21	.62-.49			
	SF-36			SF-36		
Mental Health Single Metric Score	34-37	50	3-6	59.17	65.38	6.21
Pain Score	45-46	50	4-5			
PCS (Physical Health Composite Score)				63.06	75.01	11.95
MCS (Mental Health Composite Score)	34.72	50	15.28	64.87	74.87	10
Average Hours Work Lost / Year	33 hours	n/a	n/a			
Productivity Loss Cost/ Year	€266-1130	n/a	n/a			
Average Periods of Infection Over Year	5.8 weeks	n/a	n/a			

CONCLUSION

The impact of V/V is reported as both significant and negative, with improved diagnosis and management being a major suggestion for improvement in patient satisfaction and quality of life. Women complained of severe social and sexual stigma, feelings of being ashamed or unclean, and hesitation to conduct normal daily activities due to the infection. They also reported statistically significant increases in pain, anxiety and depression, and overall quality of life due to V/V. The burden of V/V translates to economic and social costs in addition to standard treatment and health care system costs, and carries mental and physical burden to sufferers. This infection should be taken as seriously and managed as carefully as COPD and asthma , and clinicians who wish to better serve their patients should consider new and improved diagnosis methods, and consider always providing an exam and diagnostic option.

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