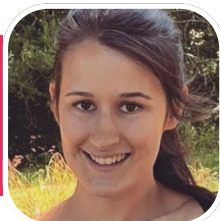


# Endometriosis and periodontal disease



Dental hygienist **Laura Shewin**<sup>1</sup> explores the links between periodontal disease and a chronic gynaecological condition.

## Introduction

One in ten women of reproductive age in the UK suffer from endometriosis<sup>1</sup> and it is the second most common gynaecological condition in the UK.<sup>2</sup> Endometriosis affects 1.5 million women; a similar number of women are affected by diabetes.<sup>3</sup> Yet, endometriosis is rarely spoken about, with many individuals not having heard of the disease and not aware of the impact it can have on someone's quality of life. Being diagnosed with endometriosis myself and recently becoming a qualified dental hygienist, I am fascinated by research that has been carried out about a possible link between periodontal disease and endometriosis.

## What is endometriosis?

Endometriosis is a chronic condition which results from an anomalous accumulation of endometrial cells outside the uterus, when these cells are usually found inside the uterus. This causes a chronic inflammation detrimental to the female reproductive system, which is characterised by intense intestinal pain.

## Signs and symptoms

Endometriosis can also have a significant impact on an individual's personal life, such as causing:

- Chronic pain
- Fatigue/lack of energy
- Depression/isolation
- Problems with a couple's sex life/relationships
- An inability to conceive
- Difficulty in fulfilling work and social commitments.<sup>4</sup>

## Author information

<sup>1</sup>Laura Shewin began dental nursing in 2013 and graduated as a dental hygienist from Eastman Dental Hospital in 2020. She is now working in Lewes and Uckfield in East Sussex.

Due to these signs and symptoms being common with other conditions, it is easy for endometriosis to be misdiagnosed as other conditions such as interstitial cystitis, irritable bowel syndrome (IBS) and painful menstrual cramps.

Associated conditions which are linked to women with endometriosis include:

- Allergies
- Asthma
- Chemical sensitivities
- Autoimmune diseases
- Chronic fatigue syndrome
- Fibromyalgia
- Breast cancer
- Ovarian cancer.<sup>5</sup>

## Treatment

There is no cure for endometriosis, but there are options to have it removed and to reduce the regrowth of endometriosis. A common procedure to remove endometriosis is through having a laparoscopy – this is also the general way to diagnose endometriosis if it doesn't show up on a CT scan. The endometriosis can be removed using a laser or surgically removed during the laparoscopy. Other treatments that are used to suppress the endometriosis include the Mirena Coil (a hormonal intrauterine device) and certain contraceptive pills. Ultimately, a lot of women decide to go through with a hysterectomy. A lot of women are also

advised to become pregnant to help relieve their symptoms, although endometriosis can cause infertility, and this may not be appropriate on an individual basis to help get relief from endometriosis.

## Endometriosis and periodontal disease

Endometriosis and periodontal disease are chronic, inflammatory diseases that are more common in individuals with systemic autoimmune disorders, with both being found to alter immune modulators. Thomas *et al.*<sup>6</sup> studied the association between endometriosis and periodontal disease which may share a common pathogenesis. The proportion of



women with severe periodontitis was higher among women with endometriosis. There was a commonality of altered levels of immune modulators in patients with endometriosis and periodontal disease. Oxidative stress of the periodontal disease may enhance the stress for endometriosis. The immune dysregulation seen in periodontal disease can be the reason for the local immune deficiency propagating endometriosis.<sup>7</sup> However, this case-control study screened 25 women with endometriosis and 25 women without endometriosis for periodontal diseases; further studies with larger cohorts of endometriosis are required to provide evidence regarding the association between endometriosis and periodontal disease.

In addition, increased levels of cytokines and factors such as IL (interleukin)-1 $\beta$ , IL-6, IL-8, tumor necrosis factor- $\alpha$ , vascular endothelial growth factor, RANTES (regulated upon activation, normal T cell expressed and secreted), and monocyte chemoattractant protein-1, have been

patient not only physically, but also mentally. When bearing this in mind treating each patient, try to have brief discussions with your patients and ask them how their day-to-day life is. You could suggest that they use oral aids such as interdental brushes and floss while watching television, for example, if they are experiencing an endometriosis episode, which may make it easier and more comfortable for the patient to carry out efficiently.

Although it may seem limited as to what dental care professionals can do to support patients with endometriosis, it can be beneficial to have a discussion with patients in regard to the link between endometriosis and periodontal disease. Education and motivating patients with the importance of plaque removal is our 'bread and butter', promoting health and preventing disease for all our patients. This may indirectly help patients with managing their endometriosis, and we can hope that more research is carried out investigating the possible link between both conditions.

**'Endometriosis and periodontal disease are chronic, inflammatory diseases that are more common in individuals with systemic autoimmune diseases...'**

demonstrated in the peritoneal fluid of women with endometriosis.<sup>8,9,10,11,12,13,14,15</sup> Chronic periodontitis is linked to a chronic systemic inflammatory burden secondary to the systemic dissemination of periodontal pathogenic bacteria, their products (eg lipopolysaccharides), and locally-produced inflammatory mediators (ie, IL-1 $\beta$ , IL-6, TNF- $\alpha$ , prostaglandin E<sub>2</sub>, and thromboxane B<sub>2</sub>).<sup>16,17,18</sup>

### Importance

Although there are only a handful of studies, and there is still a lot to learn about endometriosis, it is important to educate patients with endometriosis about the link with periodontal disease. Having good oral hygiene is important as it has many links with the human body, and improved oral hygiene could lead to an improvement in endometriosis signs and symptoms.

Caring for patients holistically, it is always beneficial to be mindful of what each patient may be going through on an individual basis. Various medical conditions such as endometriosis can have a huge impact on a

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