Ovarian and Internal Iliac Vein Embolization as a Treatment of Pelvic Congestion Syndrome

Policy Number: 4.01.18
Origination: 11/2008
Last Review: 11/2013
Next Review: 11/2014

Policy
Blue Cross and Blue Shield of Kansas City (Blue KC) will not provide coverage for ovarian and internal iliac vein embolization as a treatment of pelvic congestion syndrome. This is considered investigational.

When Policy Topic is covered
Not Applicable

When Policy Topic is not covered
Embolization of the ovarian vein and internal iliac veins is considered investigational as a treatment of pelvic congestion syndrome.

Description of Procedure or Service
Pelvic congestion syndrome is characterized by chronic pelvic pain which often is aggravated by standing; diagnostic criteria are not well-defined. Embolization of the ovarian and internal iliac veins has been proposed as a treatment for patients who fail medical therapy with analgesics.

Pelvic congestion syndrome is a condition of chronic pelvic pain of variable location and intensity, which is associated with dyspareunia and postcoital pain and aggravated by standing. The syndrome occurs during the reproductive years, and pain is often greater before or during menses. The underlying etiology is thought to be related to varices of the ovarian veins, leading to pelvic congestion. As there are many etiologies of chronic pelvic pain, the pelvic congestion syndrome is often a diagnosis of exclusion, with the identification of varices using a variety of imaging methods, such as magnetic resonance imaging (MRI), computed tomography (CT) scanning, or contrast venography. For those who fail medical therapy with analgesics, surgical ligation of the ovarian vein has been considered. More recently, embolization therapy of the ovarian and internal iliac veins has been proposed. Vein embolization can be performed using a variety of materials including coils, glue, and gel foam.

Regulatory Status
Not applicable.

Rationale
This policy was created in 2004 and was updated regularly with searches of the MEDLINE database. The most recent literature search was performed for the period March 2012 through March 28, 2013. Following is a summary of the key literature to date:

No randomized controlled trials have been published comparing embolization therapy for pelvic congestion syndrome to an alternative or sham/placebo treatment. Randomized controlled trials are especially needed in situations such as this where the primary symptom is pain, a subjective outcome for which a placebo response to treatment is likely. The published studies consist of case series, most
of which were retrospective and conducted outside of the United States. Case series have been discussed in several review articles, most recently in 2012. (1-3)

A summary table of the largest case series reporting the proportion of patients with improvement in symptoms (4-9) is as follows:

<table>
<thead>
<tr>
<th>Study</th>
<th>Location</th>
<th>No. of patients</th>
<th>Mean follow-up (months)</th>
<th>Clinical outcome (improvement in symptoms)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maleux et al., 2000</td>
<td>Belgium</td>
<td>41</td>
<td>19.9</td>
<td>Significant: 58.9%</td>
</tr>
<tr>
<td>Venbrux et al., 2002</td>
<td>U.S.</td>
<td>56</td>
<td>22.1</td>
<td>Significant or partial: 96%</td>
</tr>
<tr>
<td>Pieri et al., 2003</td>
<td>Italy</td>
<td>33</td>
<td>12</td>
<td>Significant: 100%</td>
</tr>
<tr>
<td>Kim et al., 2006</td>
<td>U.S.</td>
<td>127</td>
<td>45</td>
<td>Significant: 83%</td>
</tr>
<tr>
<td>Kwon et al., 2007</td>
<td>Korea</td>
<td>67</td>
<td>~44.8</td>
<td>Significant or partial: 82%</td>
</tr>
<tr>
<td>Gandini et al., 2008</td>
<td>Italy</td>
<td>38</td>
<td>12</td>
<td>Significant: 100%</td>
</tr>
</tbody>
</table>

Longer-term outcomes after coil embolization for pelvic congestion syndrome were reported by Laborda and colleagues in 2013. (10) The study included patients who were referred by a vascular surgeon. There were no clearly defined diagnostic criteria. A total of 179 of 202 women (89%) completed a 5-year follow-up. Mean age at baseline was 43.5 years. The primary outcomes were pain improvement and patient satisfaction. Pain improvement was measured on a 10-point visual analog scale (VAS) with 0 defined as no pain at all and 10 defined as the worst pain imaginable. At baseline, mean VAS was 7.34 (standard deviation [SD]: 0.7) and at 5 years mean VAS was 0.78 (SD: 1.2). The decrease in the VAS score over time was statistically significant (p<0.0001). Mean patient satisfaction was 7.39 (SD: 1.5) on a 0 to 9 scale. There were 4 cases of coil migration (2%) and these were considered major complications. As with the other case series discussed above, this study is limited by the lack a control group with which to compare outcomes.

Another limitation in the literature on embolization therapy for the treatment of pelvic congestion syndrome is lack of standardization regarding diagnostic criteria. In 2010, Tu and colleagues published a systematic review of literature on the diagnosis and management of pelvic congestion syndrome. (11) The authors commented that studies have rarely specified explicit diagnostic criteria for pelvic congestion syndrome and that definitions of pelvic pain have varied widely among studies. Moreover, most studies have not used objective outcome measures. A 2012 review article by Ball and colleagues stated that the issue of whether pelvic congestion syndrome causes chronic pelvic pain is still a matter of debate. (12) The authors noted that although venous reflux is common, not all women with this condition experience chronic pelvic pain and, additionally, chronic pelvic pain is reported by women without pelvic congestion syndrome.

**Summary**
Randomized controlled studies using well-defined diagnostic criteria are required to establish the safety and efficacy of this procedure. The available literature regarding embolization therapy for the treatment of pelvic congestion syndrome is inadequate to draw clinical conclusions; thus the treatment is considered investigational.

**Practice Guidelines and Position Statements**
Society of Interventional Radiology (SIR): A fact sheet on chronic pelvic pain in women endorsed coil embolization as an effective treatment option for pelvic congestion syndrome. (13)

American College of Obstetricians and Gynecologists (ACOG): No relevant policy positions on embolization for treating pelvic congestion syndrome were identified on the organization’s website.

**Medicare National Coverage**

No national coverage determination.

**References**


**Billing Coding/Physician Documentation Information**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>36012</td>
<td>Selective catheter placement, venous system; second order, or more selective, branch (eg, left adrenal vein, petrosal sinus)</td>
</tr>
<tr>
<td>37241</td>
<td>Vascular embolization or occlusion, inclusive of all radiological supervision and interpretation, intraprocedural roadmapping, and imaging guidance necessary to complete the intervention; venous, other than hemorrhage (eg, congenital or acquired venous malformations, venous and capillary hemangiomas, varices, varicoceles)</td>
</tr>
</tbody>
</table>

There are no specific CPT codes for this procedure. The nonspecific CPT codes above may be used.

**Additional Policy Key Words**

N/A

**Policy Implementation/Update Information**

11/1/08 New policy; considered investigational.
11/1/09 No policy statement changes.
11/1/10  No policy statement changes.
11/1/11  No policy statement changes.
11/1/12  No policy statement changes.
11/1/13  No policy statement changes.
4/1/14   Removed deleted cpt code 37204.

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