Guaifenesin and increased sperm motility: a preliminary case report

Background: A review of the literature and an extensive Medline search revealed that this is the first case report of the use of guaifenesin to increase sperm motility.

Case: A 32-year-old male patient presented for an infertility evaluation. He reported an inability to conceive with his wife after 18 months of unprotected intercourse. A semen analysis was performed that included spermatozoa count, liquefaction, morphology, motility, viscosity and volume. Initial results of the semen analysis demonstrated low sperm count and motility. The provider offered treatment with guaifenesin 600 mg extended release tablets twice daily. Two months after guaifenesin therapy the semen analysis was repeated that demonstrated marked improvement in both total sperm count and motility.

Conclusion: Evidence for the effectiveness of guaifenesin is almost entirely anecdotal. Given the mechanism of action of guaifenesin, it is not clear from this case why the patient demonstrated such a large improvement in both sperm count and motility. Additional studies of the effects of guaifenesin on male fertility could yield information on the medication’s effect on men with normal or decreased total sperm counts.

Keywords: sperm motility, guaifenesin, infertility, male pregnancy
were obtained through masturbation and provided to the lab within 30 minutes of collection.

The patient’s primary care provider offered treatment with guaifenesin 600 mg extended release tablets twice daily. The semen analysis was repeated 2 months after initiation of guaifenesin therapy. The repeat semen analysis demonstrated marked improvement in both total sperm count and motility (Table 1). The patient made no other significant lifestyle changes during the treatment course with guaifenesin. At the time of writing, however, the patient’s wife had not yet conceived a child.

**Conclusion**

This case report describes the semen analysis laboratory results in a male patient who was given guaifenesin. Guaifenesin is a mucolytic agent usually taken orally to assist the expectoration of phlegm from the airways in acute respiratory tract infections. Guaifenesin is a safe medication that is available over the counter. Its use may improve both male and female infertility related to mucus production. Scientific evidence for the effectiveness of guaifenesin is almost entirely anecdotal; a review of medical literature revealed very limited data on use of guaifenesin for infertility. There appeared to be some improvement in a small study without controls of female infertility related to hostile cervical mucus. Check regards guaifenesin as the simplest but least effective method of improving cervical mucus. Given the proposed mechanism of action of guaifenesin, it is not clear from this case why the patient demonstrated such a large improvement in both sperm count and motility. Additional study of the effects of guaifenesin on male fertility suggests the need to conduct a more rigorous placebo-controlled clinical trial that could yield information of the medication’s effects on men with normal or decreased total sperm counts.

**Disclosure**

The authors disclose no conflicts of interest.

**References**


---

**Table 1 Semen analysis laboratory results**

<table>
<thead>
<tr>
<th>Lab result</th>
<th>January 6, 2009</th>
<th>March 3, 2009</th>
</tr>
</thead>
<tbody>
<tr>
<td>Motility</td>
<td>10%</td>
<td>61%</td>
</tr>
<tr>
<td>Sperm count (million/mL)</td>
<td>2.4</td>
<td>34.7</td>
</tr>
<tr>
<td>Viscosity</td>
<td>Normal</td>
<td>Normal</td>
</tr>
<tr>
<td>Volume (mL)</td>
<td>4.0</td>
<td>4.0</td>
</tr>
<tr>
<td>Days of abstinence</td>
<td>4</td>
<td>3</td>
</tr>
</tbody>
</table>